

FLORIDA HIGHWAYS

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Vol. VI

No. 6



Project 61-A, Federal Aid, Road 1, Gadsden County

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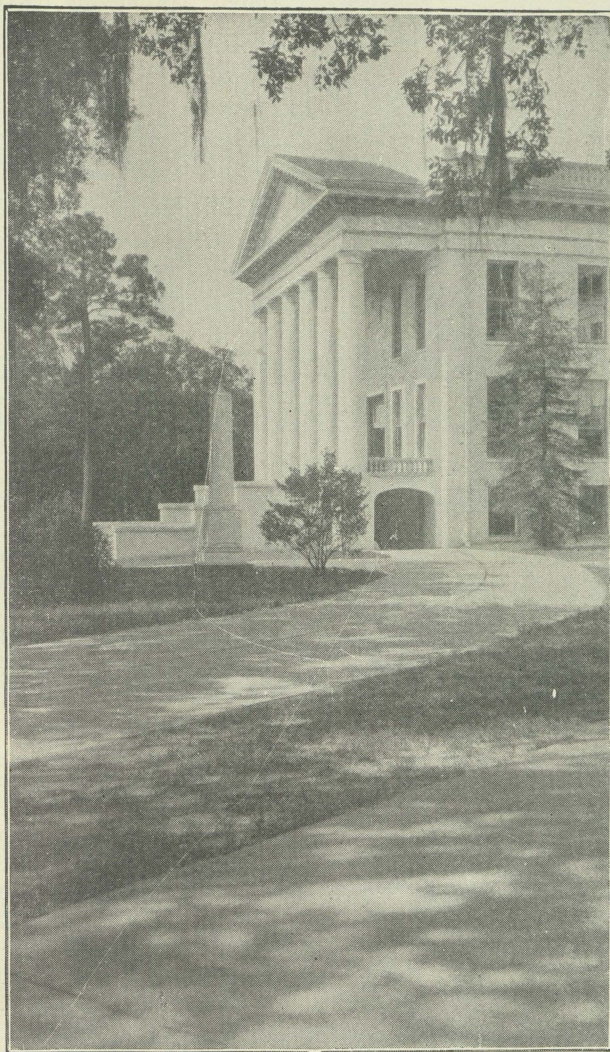
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F L O R I D A

Vol. VI
No. 6



H I G H W A Y S

JUNE
1929

Board Names Winners in Safety Essay and Lesson Competition

Brendan A. Finn, Massachusetts School Boy, Triumphs Over More than 600,000 Other Contestants. Teacher Earns \$500 and Trip to Washington—Distinguished Men and Women Serve on Committees.

WINNERS of its national awards in the safety essay and lesson contests, conducted among elementary school pupils and teachers throughout the United States by the Highway Education Board, have been announced at the organization's headquarters. It was the seventh annual national safety campaign held under the auspices of the board. An eighth is being conducted now. Altogether, \$6,500 are given as awards in these contests.

Brendan A. Finn, 11-year-old pupil in Prescott school, Somerville, Mass., was announced as the winner of the first national awards among the pupils, their subject being "Why We Have and Practice Traffic Rules." In addition to a State prize, consisting of a gold medal and a check for \$15, he now re-

ceives a gold watch and a trip to Washington. The other two essay winners, each of whom will be awarded a gold watch, are Jack Glover of the Laurelhurst School, Portland, Ore., and Robert W. Tufts of the Sherrill Junior High School, Sherrill, N. Y.

The national essay judges were Mrs. James J. Davis, wife of the secretary of labor; Dr. Ernest W. Butterfield, state commissioner of education for New Hampshire, and the late Halsey Fiske, president of the Metropolitan Life Insurance Company, New York City.

Miss Amy M. Striley, teacher in the seventh and eighth grades, Beverly Farms school, Beverly Farms, Mass., has the honor of winning first national award among the elementary school teachers who submitted lessons on "Objectives and Methods of Education in

Street and Highway Safety." Five hundred dollars and a trip to Washington constitute the prize which she will receive. The winner of the second award for teachers is Miss Cleota Thorpe of the McKinley school, Huron, S. D., who will receive \$300; and the third prize of \$200 goes to Miss Beula J. Anderson of the Clear Lake school, Clear Lake, Minn.

The members of the national committee awarding these prizes were Dr. Uel W. Lamkin, president, National Education Association; Dr. A. T. Allen, state superintendent of public instruction for North Carolina, and Frank T. Sheets, chief highway engineer for Illinois.

More than 600,000 pupils, it is stated, took part in the essay contest. The prizes are donated by the National Automobile Chamber of Commerce, checks in varying amounts and gold, silver and bronze medals being given to the winning contestants in all of the states, as well as in Alaska, the Canal Zone, Hawaii, the Philippines and Porto Rico. In the teachers' contest, it is reported that more than 100,000 participated. The first national prizes will be presented to the winners, it is announced, on the occasion of their visit to Washington in the near future.

Transactions at a Special Meeting of the State Road Department Held at Tallahassee, May 15th, 1929.

PURSUANT to due and legal notice, a meeting of the State Road Department of Florida was held at Tallahassee on the 15th day of May, A. D. 1929, with the following members present: Robert W. Bentley, chairman; W. A. Shands, J. Harvey Bayliss, Ernest R. Graham and G. D. Perkins. J. L. Cresap, State Highway Engineer; B. A. Meginniss, attorney for the Department; W. P. Bevis, secretary, and H. J. Morrison, Federal Highway Engineer, were also present.

The minutes of the special meeting held May 9th, 1929, were read and, on motion of Mr. Perkins and seconded by Mr. Bayliss, were adopted as read.

Alachua County—Road and Bridge District No. 1—Road 2

Major W. R. Thomas and H. L. Baker, representing District No. 1 of Alachua county, appeared before the Department and requested that the county or district be relieved of its indebtedness to the Department for funds pledged to aid in the construction of State Road 2. The gentlemen gave as their reasons for the request, the following:

(1) Alachua county has constructed more than one million dollars worth of State roads.

(2) Two hundred thousand dollars for the construction of State Road 14 was placed with the Department more than three years before the same was completed.

(3) The county has had the burden of the maintenance of the old road between Gainesville and the Putnam county line (18 miles) for more than three years, which was not contemplated.

On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

RESOLVED, That action on the request of the Alachua county delegation be deferred until the Department has been advised whether it could legally grant the request, if it should decide that same should be granted.

RECEIPT OF BIDS

The hour of 10 o'clock having arrived, the Department proceeded to open and read bids submitted pursuant to due advertisement on the projects hereinafter set out, which projects, together with the bidders thereon and the amounts of their several bids, are as follows:

Projects 749-750—Road 14—Gilchrist County

The following bids were received on rock base with surface treatment:

L. M. Gray, Gainesville, using rock.....	\$ 99,563.54
L. M. Gray, Gainesville, using slag.....	97,564.08
Manly Const. Co., Ocala, using rock.....	104,827.19
Manly Const. Co., Ocala, using slag.....	104,827.19
L. B. McLeod Const. Co., Tampa, using rock	91,565.70
L. B. McLeod Const. Co., Tampa, using slag	92,565.43
Southeastern Const. Co., Bradenton, using rock	97,174.21
Southeastern Const. Co., Bradenton, using slag	98,173.94

Project 615—Road 5—Sarasota County

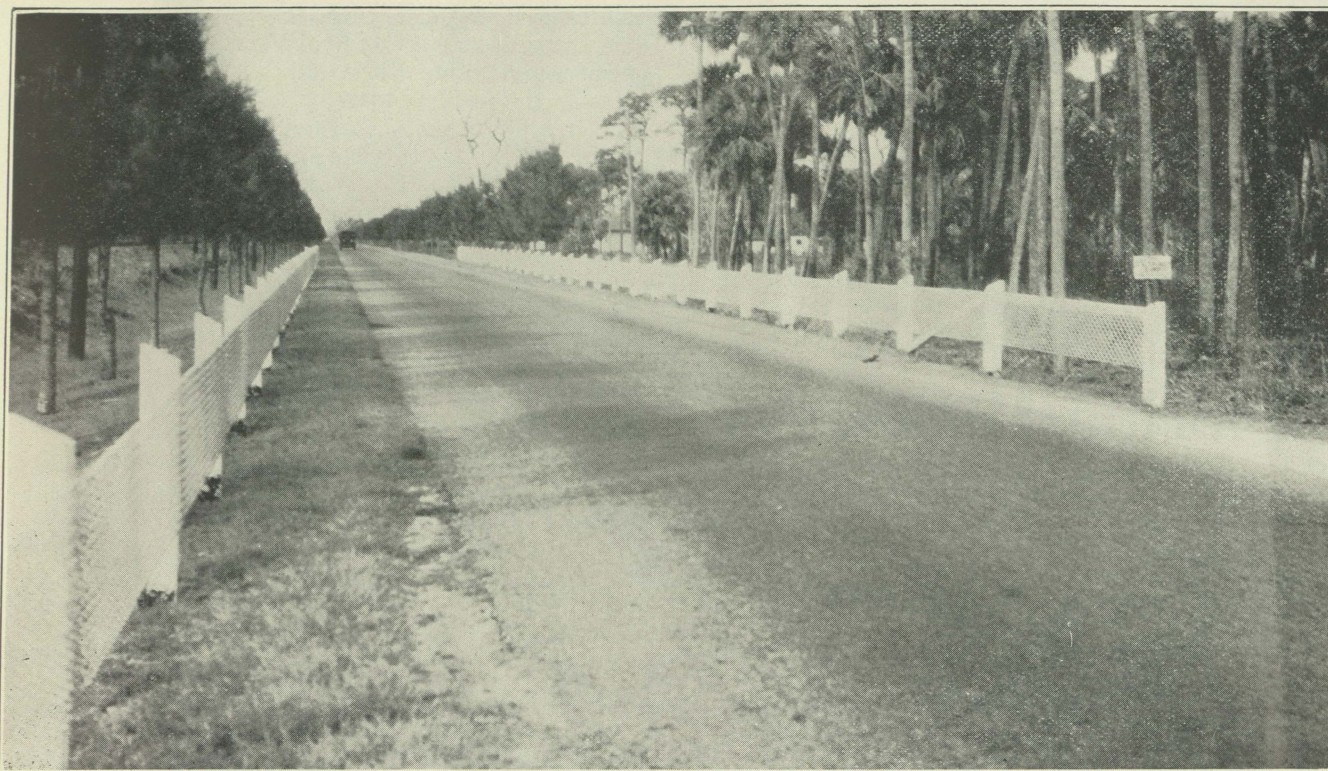
The following bids were received on rock base with surface treatment:

Southeastern Const. Co., Bradenton, using rock	\$ 20,370.70
Southeastern Const. Co., Bradenton, using slag	20,515.80
Stidham & Hughes, Lakeland, using rock.	21,804.30
Stidham & Hughes, Lakeland, using slag.	22,094.50
L. B. McLeod Const. Co., Tampa, using rock	18,509.00
L. B. McLeod Const. Co., Tampa, using slag	18,654.10
Smith & Smith Const. Co., Ft. Myers, using rock	18,365.00
Smith & Smith Const. Co., Ft. Myers, using slag	18,655.20
J. W. Crawford, Sarasota, using rock.....	21,819.30
J. W. Crawford, Sarasota, using slag.....	22,109.50
W. J. Bryson Paving Co., Jacksonville, using rock	22,109.50
W. J. Bryson Paving Co., Jacksonville, using slag	22,399.70
E. F. Powers Const. Co., West Palm Beach, using rock	21,936.30
E. F. Powers Const. Co., West Palm Beach, using slag	22,226.50
Manly Const. Co., Ocala, using rock.....	23,315.00
Manly Const. Co., Ocala, using slag.....	23,315.00

Road 25—Palm Beach County

The following bids were received for surface treatment:

McVay, Lindsay & Son, Palm Beach, using rock and sand	\$ 7,021.48
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Project 36-A, Road 4, Indian River County

McVay, Lindsay & Son, Palm Beach, using rock	13,141.80
McVay, Lindsay & Son, Palm Beach, using slag	15,394.68
H. E. Wolfe Const. Co., St. Augustine, using rock and sand.....	6,758.64
H. E. Wolfe Const. Co., St. Augustine, using rock	9,011.52
H. E. Wolfe Const. Co., St. Augustine, using slag	9,762.48
S. P. Snyder & Son, Inc., Ft. Lauderdale, using rock and sand.....	3,867.44
S. P. Snyder & Son, Inc., Ft. Lauderdale, using rock	8,560.94
S. P. Snyder & Son, Inc., Ft. Lauderdale, using slag	6,458.26
Southern Asphalt Const. Co., Orlando, using rock and sand.....	5,068.98
Southern Asphalt Const. Co., Orlando, using rock	12,015.36
Southern Asphalt Const. Co., Orlando, using slag	13,141.80
A. O. Greynolds Co., Inc., using rock and sand	6,758.64
A. O. Greynolds Co., Inc., using slag.....	11,827.62

Project 820—Road 96—Jefferson County

The following bids were received for clearing, grubbing, grading and drainage structures:

Penton-Mathis Const. Co., Floral, Ala...\$	62,961.09
Bishop Contracting Co., Inc., Monticello, Fla.	60,510.53
Everglades Const. Co., Hialeah, Fla.....	69,380.50
H. D. Spangler & Co., Pompano, Fla.....	57,280.17
Murphy Const. Co., Orlando, Fla.....	58,616.49
Curry & Turner Const. Co., Bradenton, Fla.	59,409.80

Project 821—Road 96—Jefferson County

The following bids were received for clearing, grubbing, grading and drainage structures:

Everglades Const. Co., Hialeah, Fla.....\$	29,168.69
Southeastern Const. Co., Bradenton, Fla..	23,221.66
Penton-Mathis Const. Co., Floral, Ala....	26,065.47
Murphy Const. Co., Orlando, Fla.....	27,297.06
R. J. Carroll, Lamont, Fla.....	25,248.33
H. D. Spangler & Co., Pompano, Fla.....	23,162.55
Bishop Contr. Co., Inc., Monticello, Fla...	24,638.04

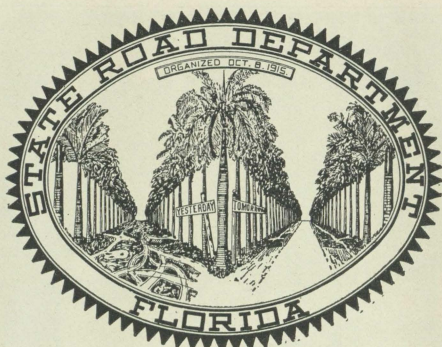
Projects 717 and 706-A—Road 28—Bradford and Clay Counties

The following bids were received for alternate types of asphaltic pavement:

H. E. Wolfe Const. Co., St. Augustine, rock base rock treatment.....	\$156,287.96
H. E. Wolfe Const. Co., St. Augustine, rock base slag treatment.....	157,703.08
L. B. McLeod Const. Co., Tampa, rock base rock treatment.....	160,633.32
L. B. McLeod Const. Co., Tampa, rock base slag treatment.....	162,048.44
F. W. Long & Co., Jacksonville, rock base rock treatment	159,076.48
F. W. Long & Co., Jacksonville, rock base slag treatment	159,784.04
Manly Const. Co., Ocala, bituminous concrete	263,067.28
Manly Const. Co., Ocala, sheet asphalt....	256,699.63
Manly Const. Co., Ocala, rock base rock-treatment	157,582.58
Manly Const. Co., Ocala, rock base slag treatment	157,582.58

Project 726—Road 19—Dixie County

The following bids were received for furnishing and delivering approximately 55,000 tons lime rock:



Florida Highways

Published Monthly
Official Publication of the State Road Department

PERSONNEL OF DEPARTMENT

ROBERT W. BENTLEY (*Bradenton*), *Chairman*
(*Official Residence, Tallahassee.*)

W. A. SHANDS, *Gainesville*

J. HARVEY BAYLISS, *Pensacola*

G. D. PERKINS, *Jacksonville*

ERNEST R. GRAHAM, *Pennsuco*

Members.

WALTER P. BEVIS, *Tallahassee, Secretary*

PERSONNEL OF EMPLOYEES IN GENERAL CHARGE OF THE WORK OF THE DEPARTMENT

Engineering Division

J. L. Cresap, Tallahassee.....State Highway Engineer
L. K. Cannon, Tallahassee....Ass't. State Highway Engineer
G. L. Derrick, Tallahassee.....Bridge Engineer
Harvey A. Hall, Gainesville.....Testing Engineer
F. W. Berry, Jr., Tallahassee.....Office Engineer
Paul G. Kennemur, Gainesville, Acting Supt. of Equipment
R. L. Bannerman, Marianna.....1st Division
Counties—Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf,
Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa
Rosa, Wakulla, Walton, Washington.
J. H. Dowling, Lake City.....2nd Division
Counties—Baker, Bradford, Clay, Columbia, Dixie, Duval, Ham-
ilton, Lafayette, Madison, Nassau, St. Johns, Suwannee, Tay-
lor, Union.
R. C. Fergus, West Palm Beach.....3rd Division
Counties—Brevard, Broward, Collier, Dade, Glades, Hendry, Indian
River, Lee, Martin, Monroe, Okeechobee, Palm Beach, St. Lucie.
L. B. Thrasher, Ocala.....4th Division
Counties—Alachua, Citrus, Flagler, Gilchrist, Herndando, Lake,
Levy, Marion, Orange, Putnam, Seminole, Sumter, Volusia.
Henry Wilson, Lakeland.....5th Division
Counties—Charlotte, Desoto, Hardee, Highlands, Hillsborough,
Manatee, Osceola, Pasco, Pinellas, Polk, Sarasota.

Auditing Division

S. L. Walters, Tallahassee.....Auditor

B. A. Meginniss, Attorney for the Department,
Editor and Business Manager.

Ocala Lime Rock Corp., Ocala.....	\$82,500.00
Dixie Lime Products Co., Ocala.....	82,500.00
Marion County Lime Co., Ocala.....	82,500.00
Anderson & Couch, Tampa.....	68,750.00
Cummer Lumber Co., Jacksonville.....	73,425.00
Connell & Schultz, Inverness.....	73,425.00
Williston Shell Rock Co., Williston.....	73,150.00

Project 861—Road 31—Alachua County

The following bids were received for furnishing and delivering creosoted timber and piling:

J. F. Prettyman & Sons, Charleston, S. C...\$	1,780.19
Savannah Creosoting Co., Savannah, Ga...	1,785.30
Homer Williams, Thomasville, Ga.....	1,803.10
Pensacola Creosoting Co., Pensacola, Fla...	1,996.35
Eppinger & Russell Co., Jacksonville, Fla..	1,734.20

Walton County—Maintenance Section 8

The following bids were received for furnishing and delivering creosoted timber to Mossy Head:

J. F. Prettyman & Co., Charleston, S. C...\$	335.54
Eppinger & Russell Co., Jacksonville, Fla...	365.43
Homer Williams, Thomasville, Ga.....	350.25
Pensacola Creosoting Co., Pensacola, Fla...	326.90
Savannah Creosoting Co., Savannah, Ga...	343.25

Project 501-D—Road 6—Gulf County

The following bids were received for furnishing and delivering creosoted timber and piling to Scott's Ferry:

J. F. Prettyman & Sons, Charleston, S. C...\$	12,036.02
Homer Williams, Thomasville, Ga.....	11,098.25
Pensacola Creosoting Co., Pensacola, Fla...	10,975.51
Eppinger & Russell, Jacksonville, Fla....	11,167.37
Savannah Creosoting Co., Savannah, Ga...	11,899.01

PURCHASE OF TRACTOR

The Department received and opened bids, pursuant to due advertisement, for the purchase of a tractor, which bids are as follows, to-wit:

Burgman Tractor Equipment Co.—

One Standard "Caterpillar" 30, delivered Camp Walton, local stock.....\$	2,645.00
Delivered Camp Walton, factory....	2,605.00

Julien P. Benjamin—

One Monarch Model "50," weight, 14,500 lbs., 50 h. p., delivered Camp Walton	3,695.00
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Lawrence-Goodling Co., Inc.—

One 30 h. p. Cleveland Tractor, delivered Camp Walton.....	2,589.00
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Florida Truck & Tractor Co.—

One McCormick-Deering Tractor, weight 7,200 lbs., track layer, delivered Camp Walton	1,855.00
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Reynolds Machinery Co., Inc.—

One Bates No. 30, five-ton Tractor, delivered Camp Walton.....	2,500.00
One Bates Model No. 40 Crawler Tractor, delivered Camp Walton.....	3,500.00

After reading the bids listed above, Mr. Shands made a motion, seconded by Mr. Perkins, that the announcement of awards be made tomorrow morning at 10 o'clock, which motion was duly carried.

Road 2—Lake County

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

RESOLVED, That the chairman and State high-



Project 604, Road 4, Volusia County

way engineer be authorized to go to Lake county and designate the particular location of State Road 2 between Eustis and Mount Dora.

Leon County—Road No. 10

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the chairman be authorized to advertise for bids for the construction of State Road 10 between Tallahassee and the Wakulla county line when Leon county shall have paid over to the Department the funds necessary for such construction.

Rock to Be Used in Surface Treatments

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

RESOLVED, That the State highway engineer be authorized to alter the specifications for surface treatments, by increasing the size of covering material to be used.

Road No. 30—Indian River and Osceola Counties

The chairman reported that pursuant to a resolution of the Department, he has inspected State Road No. 30, in Indian River and Osceola counties, and has found that that section between Dyke Canal and the Kissimmee River has been constructed in accordance with State specifications.

On motion of Mr. Shands, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, That the Department take over for maintenance that section of State Road No. 30, between Dyke Canal and the Kissimmee River, in Indian River and Osceola counties.

At this juncture the chairman retired and Mr. Shands assumed the chair.

Hillsborough County—Alafia River Bridge

Mr. W. T. Williams, chairman of the Board of County Commissioners of Hillsborough county, presented a petition from property owners, asking that the bridge across Alafia River on Road No. 5 be constructed with a movable or draw span. Mr. Williams stated that he believes that when he has explained to these petitioners the plans of the Department, that they will be satisfied to withdraw their petition.

Project 821—Road 96—Jefferson County

Mr. W. B. Bishop, of Bishop Contracting Company, appeared before the Department and stated that he had done certain work on the above project last year, when he understood that he would receive contract therefor, and asked that the Department reimburse him for work actually done.

On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the State highway engineer be directed to check up the amount and value of the work done by Bishop Contracting Company on Project 821, Road 96, Jefferson county, and make a report of his findings to this Department at its next meeting.

Road 25—Hendry County

On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

WHEREAS, This Department has found and determined and it is hereby found and determined that it is necessary, wise and expedient to secure by eminent domain the real estate hereinafter described for the purpose of a right-of-way for State Road No. 25, in Hendry County, Florida; and

WHEREAS, There has been prepared and submitted a map or plat which shows in detail the location

of State Road No. 25, which said map or plat is hereto attached and marked "Exhibit A"; now, therefore,

BE IT RESOLVED, by the State Road Department of the State of Florida, That the said map or plat be and the same is hereby adopted and approved as and for the location of said State Road 25 through Hendry county; and

BE IT FURTHER RESOLVED, That the Board of County Commissioners of Hendry county be and they are hereby requested and authorized to secure for this Department, by purchase or condemnation, the lands necessary for a right-of-way for said Road 25, and particularly the lands described as follows, to-wit:

(Description of lands is omitted).

BE IT FURTHER RESOLVED, That said County Commissioners be and they are hereby authorized to use the name of this Department in any condemnation proceedings necessary to carry out the purposes of this resolution, or to proceed in their own name as authorized by law; and

BE IT FURTHER RESOLVED, That in the event that they shall elect to proceed in the name of this Department, their attorneys be and they are hereby authorized to prepare, execute and file all necessary pleadings, affidavits or documents in connection therewith.

Project 669-W—Road 27—Claim of W. O. Parmer

Mr. R. A. Henderson, Jr., again appeared before the Department with reference to the claim of W. O. Parmer, that inadequate drainage on Road 27 had caused the land's damage to the extent of \$30,000 to \$35,000. The State Highway Engineer presented to the Department the report of Henry Wilson, division engineer, with reference to the matter, from which it appears that the damage to Mr. Parmer's property was occasioned not by the Department but by another agency. Mr. Henderson asked permission to send a copy of Mr. Wilson's report to Mr. Parmer for his comment and such other engineering data as the latter might have. Action on the matter was deferred until lunch, pending return of the chairman.

State Road No. 4—Martin County—Location Through Stuart

Mr. Stanley Kitchens appeared before the Department and requested that the present route of State Road No. 4, as now approaching and crossing the St. Lucie River in Stuart, be designated as the official location of State Road No. 4.

On motion of Mr. Graham, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the State Highway Engineer be directed to have made a survey of State Road No. 4 between the ends of the concrete pavement north of St. Lucie River and the sheet asphalt pavement south of said river, with a view to determining the proper location of State Road No. 4 between said points.

State Road 41—Okaloosa County—Claim of Mrs. Virginia White

There was presented to the Department a letter from Mrs. Virginia White, of Pensacola, describing an accident to herself and car when she plunged into a washout on Road 41, just north of Baker, on the night of April 3rd. According to the claim of Mrs. White, the road which had been washed out had no light, sign,

barricade or other warning to drivers using said highway. She asked reimbursement from the Department in the sum of \$700.00.

On motion of Mr. Graham, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the claim of Mrs. Virginia White for damages sustained by running into a washout on Road 41, three and one-half miles north of Baker, be referred to Mr. Bayliss, member of the Department, and the attorney for the Department for investigation and report at the next meeting.

Project 721-B—Rice Creek Bridge

The State Highway Engineer presented to the Department a report from Division Engineer L. B. Thrasher with regard to the collapse of Rice Creek bridge, on State Road No. 3. It appeared from said report that temporary repairs are being made to the bridge to carry the traffic on said road.

On motion of Mr. Perkins, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, That the chairman be and he is hereby authorized to advertise for bids for the construction of a bridge across Rice Creek on State Road No. 3, Putnam county.

Expense Accounts Approved

On motion of Mr. Perkins, seconded by Mr. Bayliss, the expense accounts of the members were approved and ordered paid, as follows:

W. A. Shands.....	\$44.55
Robert W. Bentley.....	37.73
Robert W. Bentley.....	19.35
J. Harvey Bayliss.....	40.40
J. Harvey Bayliss.....	41.40

On motion of Mr. Perkins, seconded by Mr. Bayliss, the Department was adjourned until 2 o'clock P. M.

AFTERNOON SESSION—2:00 o'clock

The Department met pursuant to adjournment. Present as at morning session.

Lee County—Road 25

Mr. Claude Ogilvie, Representative of Lee County, presented to the Department a request that the State take over for maintenance that section of Road 25 between Fort Myers and the Hendry county line. The request was taken under advisement.

State Road No. 48

A delegation from the counties of Bradford, Clay and St. Johns, consisting of Messrs. A. W. Chadwick, W. A. MacWilliams, C. Samuel Johnson and H. K. Jackson of St. Augustine, A. G. Shands, G. W. Hulvey, E. E. Geiger and Ed Larson, of Green Cove Springs, and E. S. Matthews, of Starke, requested that the State take over and maintain Road 48 in said counties, effective January 1, 1930.

On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the request of Bradford, Clay and St. Johns counties, that the State take over Road 48 in said counties for maintenance, effective January 1, 1930, be taken under advisement.

BE IT FURTHER RESOLVED, That the engineers be directed to report to this Department on the condition of said road in said counties.



Project 581, Road 5

Installation of U. S. Markers on State Highways

Mr. Peter J. Van Geyt, of Tampa, representative of the American Automobile Association, appeared before the Department and requested that standard U. S. Highway markers be placed on roads designated as U. S. routes in Florida.

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the State Highway Engineer be directed to secure information as to the regulations and cost in connection with the placing of U. S. route markers on the highways in this State designated as portions of U. S. routes.

Detour Bulletins

Mr. Van Geyt, above referred to, also requested that the Department prepare and send out semi-monthly mimeographed reports showing the location and condition of all detours on State roads.

On motion of Mr. Graham, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That the State Highway Engineer be requested to investigate and report on the feasibility and desirability of issuing semi-monthly bulletins showing the location and condition of detours on State roads.

Monroe County—Road 4-A—Correction of Minutes

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

WHEREAS, At a meeting of the Department held March 6, a resolution was adopted taking over for maintenance Road 4-A, in Monroe county, exclusive of the bridges; and

WHEREAS, It appears by the minutes of said meeting that the said road was taken over for maintenance only during the year 1929, when in fact it was

the intention to take the same over unreservedly; now, therefore, be it

RESOLVED, That the minutes of said meeting and the resolution above referred to, which appears on page 70 of the minute book containing said minutes, be amended so that the same shall read as follows: Resolved, That this Department do take over for maintenance that part of Road 4-A, in Monroe county, exclusive of the ferry and bridges thereon.

Gadsden County—Road 58

Messrs. E. H. Slappey and Claude Arrington presented to the Department a request that that stretch of State Road 58 between Havana and State Road 1 be repaired and maintained by the Department.

On motion of Mr. Bayliss, seconded by Mr. Perkins, the chairman was requested to look into the matter and make a report to the Department.

On motion of Mr. Bayliss, seconded by Mr. Perkins, the Department was adjourned until 9 o'clock, May 16th.

MAY 16, 1929—9:00 O'CLOCK A. M.

The Department met pursuant to adjournment. Present as on yesterday.

Okeechobee County—Refund of \$210,000.00

Mr. Graham, member of the Department, submitted to the members a report of his investigation of the merits of the claim of Okeechobee county for a refund of \$210,000.00 from the State Road Department, on account of the construction of State Road No. 8. He stated that in his judgment the same is a moral obligation of this Department, and recommended that the request of Okeechobee county, that said amount, or

as much thereof as may be necessary, be used in the completion of the construction of State Road No. 29 in said Okeechobee county, as authorized by law, be granted.

There were present in connection with this matter Representative Peter Tomasello, Jr., and T. W. Conely, attorney for said county.

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

WHEREAS, Okeechobee county has presented to this Department a claim that said Department agreed to and with the county to refund to said county the sum of \$210,000.00, advanced in the construction of State Road No. 8, in said Okeechobee county; and

WHEREAS, The members of this Department are convinced from the evidence which has been submitted by the representatives of said county that this Department is morally obligated to refund to said county the said amount, or so much thereof as may be necessary to complete the construction of State Road No. 29, in said county; and

WHEREAS, The Legislature of Florida, by Chapter No. 10962, Special Acts of 1925, did provide that said amount, when refunded to said county, should be applied upon the construction of said Road No. 29, in said county; now, therefore,

BE IT RESOLVED, That the Department does hereby adopt the recommendation made to it by its member, Mr. Graham.

BE IT FURTHER RESOLVED, That the Department does hereby acknowledge and admit its indebtedness to the County of Okeechobee, in the sum of \$210,000.00, or so much thereof as may be necessary to complete the construction of State Road No. 29 in said county to the Osceola county line.

BE IT FURTHER RESOLVED, That this resolution is conditioned and contingent upon agreement by the County of Okeechobee, that when said Department shall have completed the construction of said State Road No. 29 in said county, to the Osceola county line, that such completion of construction shall be and constitute a complete settlement and acquittal of any and all liability or obligation on the part of the said State Road Department to the County of Okeechobee.

Project No. 669-W—Claim of W. O. Parmer

On motion of Mr. Shands, seconded by Mr. Perkins, the following resolution was adopted:

WHEREAS, There has been filed by W. O. Parmer a claim that by reason of the inefficient drainage of State Road No. 27, his citrus grove has been damaged to the extent of approximately \$30,000.00 to \$35,000.00; and

WHEREAS, This Department referred the matter to its division engineer and has now before it his report in which it appears that said damage was caused not by the operations of this Department but by the construction of a railroad corporation; and

WHEREAS, The attorney for Mr. Parmer has requested the said engineer's report be referred to Mr. Parmer for such additional engineering data as he may have;

NOW, THEREFORE, BE IT RESOLVED, That if, and when the chairman shall receive from Mr. Parmer the said information and should determine that there is reasonable basis for such claim, that he be and he is authorized to lay before the Legislature all data and information he may have for consideration in

connection with such legislation as may be proposed.

BE IT FURTHER RESOLVED, That this resolution shall not be construed as an acknowledgment or admission that this Department is in any way liable or responsible for said damage.

Project 669-V—Road 27—Claim of H. V. Coarsey

Mr. H. F. Tabor, of Bradenton, presented to the Department a claim of H. V. Coarsey, in the sum of \$4,130.50, for damages to car and person growing out of an accident on Project 669-V, Road 27, last year. Mr. Tabor submitted in connection with the claim documentary evidence as to the nature and extent of the accident.

On motion of Mr. Bayliss, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, That it is the sense of this Department that H. V. Coarsey is entitled to reasonable relief on account of damages to himself and car, growing out of an accident on Project 669-V, Road 27, in 1928.

BE IT FURTHER RESOLVED, That the chairman be and he is hereby authorized to submit to the Legislature all evidence in his possession touching the matter of said claim, for consideration in connection with such legislation as may be proposed for the relief of Mr. Coarsey.

Award of Contracts

The Department having under consideration bids received on yesterday for the construction of certain projects and the purchase of certain materials and equipment, the following resolution was on motion of Mr. Shands, seconded by Mr. Bayliss, duly adopted:

BE IT RESOLVED, That the bid of S. P. Snyder & Son for the construction of Road 25, Palm Beach County, be and the same is hereby declared irregular, and that the same be and it is hereby rejected.

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

WHEREAS, This Department, after due advertisement, on yesterday received bids for the construction of the projects hereinafter designated; and the furnishing of certain materials; and

WHEREAS, The firms and individuals hereinafter named are and have been determined to be the lowest responsible bidders for the respective contracts hereinafter named; now, therefore,

BE IT RESOLVED, That contracts for the construction of the projects hereinafter listed be and they are awarded as follows, to-wit:

Projects 749 and 750, Road 14, Gilchrist county; rock base with rock surface treatment; L. B. McLeod Const. Co.....	\$ 91,565.70
Project 615, Road 5, Sarasota county; rock base with rock surface treatment; L. B. McLeod Const. Co.....	18,509.00
Road 25, Palm Beach county; surface treatment, using local material; Southern Asphalt Const. Co.....	5,068.98
Project 820, Road 96, Jefferson county; clearing, grubbing, grading and drainage structures; H. D. Spangler & Co...	57,280.17
Project 821, Road 96, Jefferson county; clearing, grubbing, grading and drainage structures; H. D. Spangler & Co...	23,162.55



Project 40-A, Federal Aid, Road 4, Brevard County

Projects 717 and 706-A, Road 28, Bradford and Clay counties; rock base slag cover; Manley Const. Co.....	157,582.58
Project 726, Road 19, Dixie county; 55,000 tons lime rock; Anderson & Couch.....	68,750.00
Project 861, Road 31, Alachua County; creosoted timber and piling; Eppinger & Russell Co.	1,734.20
Walton County, Maintenance, Section 8; creosoted timber; Pensacola Creosoting Co.	326.90
Project 501-D, Road 6, Gulf County; creosoted timber and piling; Pensacola Creosoting Co.	10,975.51

Purchase of Tractor

On motion of Mr. Shands, seconded by Mr. Bayliss, the following resolution was adopted:

WHEREAS, this Department after due advertisement received bids for a tractor to be used in its work, now, therefore,

BE IT RESOLVED, that the Chairman be and he is authorized to purchase from Burgman Tractor Equipment Company, Jacksonville, a caterpillar 30 tractor, at and for the sum of \$2645.00, said tractor to be supplied from stock.

BE IT FURTHER RESOLVED, that in the event that the State Highway Engineer shall find that the Department can wait for delivery from the factory, that said tractor be furnished from the factory at a reduction from above price of \$40.00 as named in said company's bid.

At this juncture, the Chairman retired and Mr. Shands assumed the chair.

Escambia County—Road 104

Mr. L. F. Matthews of Molino appeared before the

Department and stated that there was being presented to the Legislature a bill which declares that on account of the washout of the bridge across Escambia river near Molino, on State Road 104, there exists an emergency, and seeking to direct the Road Department to construct a bridge at said point. He stated that a representative to the Legislature desired a letter from the Department with respect to said bill.

On motion by Mr. Perkins, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, that this Department decline to address a letter to the Legislature with reference to the construction of a bridge across the Escambia river, on State Road 104.

State Road No. 4—Claim of Town of Boynton

Mr. J. Stockton Bryan, of West Palm Beach, again appeared before the Department with reference to the claim of the Town of Boynton, that it is entitled to a refund from the Department in the amount of the construction of a pavement 18 feet in width on State Road 4 through said town. The State Highway Engineer, as directed by resolution at the last meeting, reported on the condition of the stretch of road referred to and submitted figures to show that, based upon the unit prices received by the Department for work outside of said town, the cost of paving 18 feet in width through the Town of Boynton would amount to \$58,948.80.

On motion of Mr. Perkins, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, That this Department does hereby acknowledge its indebtedness to the Town of Boynton, in the sum of \$58,948.80, monies paid out by said town for the construction, at the Department's request, of 18 feet width of pavement on State Road

No. 4 through said town, the said monies to be re-funded to said town as and when available.

Alachua County Road and Bridge District 1—Road 2

On motion of Mr. Perkins, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, That the Bond Trustees of Road and Bridge District No. 1 of Alachua County be notified that this Department does deny its request to be relieved from its obligation to pay funds which it has on hand which were allocated to assist in the construction of State Road 2 in said District.

Be It Further Resolved, That formal request be made of said Board of Bond Trustees for the sum of \$37,000.00, which will be accepted by the Department in full settlement of said obligation.

Road 25—Lee County

On motion of Mr. Perkins, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED, That the chairman be and he is hereby requested to advise the representatives of Lee county that on account of the condition of State Road 25 in Lee county, this Department cannot take the same over for maintenance.

Road No. 48—Clay County

Mr. A. G. Shands, of Green Cove Springs, appeared before the Department with further reference to the request that State Road 48, in Clay county, be taken over by the State for maintenance, effective January 1st, next.

On motion of Mr. Bayliss, seconded by Mr. Perkins, the following resolution was adopted:

BE IT RESOLVED, That this Department do take over for maintenance, effective January 1, 1930, that portion of Road 48 in Clay county, provided Clay county has by that date widened the grade of said road to meet State specifications.

Advertisement for Bids

On motion of Mr. Perkins, seconded by Mr. Bayliss, the following resolution was adopted:

BE IT RESOLVED, That the chairman be and he is hereby authorized to advertise for bids, returnable to a date to be fixed by him in July, on the following roads and projects, to-wit:

Road 2, Project 695, Lake County—Haines Creek to Eustis.

Road 3, Project 721-B, Putnam County—Rice Creek Bridge.

Road 4, Project 653-B, Broward County—Bridges.

Road 4, Project 654-B, Broward County—Bridges.

Road 4, Project 683-B, Palm Beach County—Bridges.

Road 5, Project 835, Citrus County—Withlacoochee River Bridge.

Road 10, Project 644-C, Wakulla County—Leon County line to Wakulla river.

Road 13, Project 742, Alachua County—Gainesville District to Levy County line.

Road 17, Project 64, Hillsborough County—Tampa to Plant City.

Road 28, Project 715-B, Union-Bradford Counties—New River Bridge.

There being no further business, on motion of Mr. Graham and seconded by Mr. Perkins, the Department was adjourned.

On Becoming a Contractor

TRACY HARRON, a member of the Northern California Chapter of the A. G. C., at a recent west coast banquet of contractors and equipment distributors, presented what he declared to be his answer to a young seeker after success who had written to the editor of the "Advice to Young Men," column in one of the leading success magazines. The young man stated in his letter: "I have driven a truck for the general store for five years. I desire to become a contractor. Please help me." Mr. Harron's reply follows:

Among the various trades and professions there is hardly one which offers the young man desiring to get ahead in this world the advantages that are his by becoming a contractor. To work among pleasant surroundings, in God's open spaces, with a group of nature's noblemen as your fellow workers and competitors, with no financial risks, with no worries, is well worth the small effort necessary to reach the goal.

The necessary qualifications for becoming a contractor are few. No previous experience is necessary, though if the young man about to be a contractor has been a truck driver, he will have a very thorough ground work in the engineering end of the game.

The most rigid requirement is that you have no money. If you are unfortunate enough to possess a little wealth, this can readily be remedied with the aid of a good Bootician, or even with a lady, who

may be either a blonde or a brunette. The main thing is that to start being a contractor you must have no money.

Having acquired the necessary qualifications, all that is necessary is that you seek out a member of the Associated Machinery Merchants, or the Associated Equipment Distributors, or both, and tell this equipment dealer that a concrete mixer, several wheelbarrows, some shovels and a case of Scotch are required. The next morning these will be delivered to your door, and you are now ready to be a contractor.

If you like a motor, it might also be a nice thing if you call on one of the several motor truck agencies. You will find that your reception there is almost as hearty as that which you get at the equipment dealer's. Mention the fact that you are a contractor, and that afternoon a nice, new shiny truck will be delivered to your yard, if you have one. In case you want two or more trucks, all that is necessary is that you mention your old truck. If you don't own an old truck, a worn-out radio, or even an old style Victrola will do, and upon mentioning this, whatever it may be, you will be told that the allowance made will be so many thousand dollars, and that afternoon two or more nice, new, shiny trucks will be delivered to you. You may also be the owner of two cases of Scotch, provided you have handled the situation properly.



Project 645-B, Road 10, Ochlockonee River, Wakulla and Franklin Counties

The next move is to see a bonding company. They will ask you a lot of questions, but by a little thought before answering you should have no trouble in convincing the bonding company that you own a concrete mixer, several wheelbarrows, some shovels, and maybe even a truck or two. It may be necessary also to prove that you own a case of Scotch, but if you are clever enough, when you get through with the bonding company you will have three cases of Scotch.

You are now a contractor and a member of one of the oldest and most respected professions. The next thing for you to do is to get a job. Look in one of the trade journals and pick out a job which is located at some pleasant spot. If you enjoy fishing, choose one located in the Sierras. If, on the other hand, you enjoy solitude, pick out one located in one of the desert wastes. If you enjoy rural life, pick out a location in one of the lesser known hamlets. The main thing is to locate yourself among pleasant surroundings.

You now come to figuring your bids, one of the most technical phases of being a contractor and one which has never been mastered even by men who have been contractors for years and years. This puts you on a par with even the most experienced man in the profession. In fact, some beginners will sidestep this issue entirely by getting other contractors to do the figuring, a process known as "subbing the job." You would then merely hire someone to add up the totals submitted by these sub-contractors and present this total as your bid. However, most contractors prefer to reap the rich rewards entirely for themselves and in such case you would of necessity submit your own figure. Anyone who has already had a contract will feel it necessary to use certain figures and facts, but they are usually not reliable, and besides, they require a lot of figuring. The be-

ginner should confine himself to a few modest statements, such as two plus two equals four. Do not complicate your figuring with a lot of stuffy detail regarding sand, and cement, and labor. To arrive at the figure that you are to put in on your bid, take the number of your auto license, divide by four, subtract one-half, and then, in order to be certain, subtract one-half of what is left. This is the figure that you will use, and you will be pleasantly surprised to see your name in print and be informed that you have the contract. The balance of what you will have to do need not be mentioned here, as it will be entirely automatic.—*The Central Constructor* (Iowa).

PLAN PRIVATE ROAD FROM BOSTON TO NEW YORK

Plans for half a billion dollar four-lane private highway connecting New York and Boston were outlined in a statement issued recently by attorneys for the interests behind the project. The general assembly will be asked to grant a charter for the construction of the highway, intended for use of motor trucks and busses. The petition is being prepared for presentation when the legislature convenes in January.

Financial backing for building the highway, it was said, will be furnished by the New York banking firms of Pope & Richardson. Toll rates will be subject to the control of the public utilities commission.—*Michigan Roads and Pavements*.

Woman's Rights

Mrs. Carney rushed into her living room. "Oh, Walter," she cried as she panted for breath. "I dropped my diamond ring off my finger and I can't find it anywhere."

"It's all right, Olive," said Walter; "I came across it in my trousers pocket."

Depreciation of Equipment Used in Highway Construction and Maintenance

A Committee Report Presented at the Cleveland Convention, A. R. B. A.

By W. A. VAN DUZER

Assistant Chief Engineer, Pennsylvania Department of Highways; Chairman American Road Builders Association
Committee on Depreciation of Equipment

MODERN road construction is a product of the last quarter of a century. Road types and methods have changed materially in that time. In the early days, before the advent of rigid type pavement, the equipment used upon a construction project represented only a small portion of the cost of the work. After the war the labor shortage became acute and the majority of construction was rigid type pavement. With the increased cost of work, equipment was invented to reduce the amount of labor and increase production.

Why Committee Was Established

Many contractors did not realize that replacement of equipment must be carried by the job, or the units of work performed, and found that their total assets at the end of a season or two consisted of equipment, the greater part of which was obsolete. The directors of the American Road Builders' Association, realizing the situation which had previously existed, had three principles in mind when they appointed a committee on depreciation of contractors' equipment.

First—To have the information so that fair rental rates might be set up by the contractor for his equipment for use in connection with the cost-plus-a-fee contracts; such rental rates, however, not to include profit. If a profit on the equipment is to be added, an adjustment in the rate will be necessary. Also, that the contractor might set up a rental rate to use on contract work so that sufficient money would be set aside to pay for the depreciation, interest, insurance and operation of the equipment.

Second—To give public officials information on the value of machines so that they may evaluate the list of plant submitted with the bidder's questionnaire. Also, to give public officials information for setting up rental rates for equipment owned by the states or their subdivisions, used principally on maintenance work, so that the equipment charges will be represented in the cost of the work.

Third—To provide information for bankers and others who have credit transactions with the construction companies.

In addition to the value of the depreciation schedule to contractors and road officials, there are five branches of the Federal Government now working on the subject of depreciation; they are, the Interstate Commerce Commission, Internal Revenue Department, Federal Power Commission, Department of Commerce and the Tariff Commission.

When a Machine Is Obsolete

An aggregate of improvements over a period of time will make any machine obsolete. This is the particular type of depreciation which is being studied by the Interstate Commerce Commission. Gradual depreciation is really obsolescence.

It has been very difficult to get accurate information on the subject of depreciation on account of the insufficiency of records and it is hard to tell the difference between depreciation and obsolescence. The sub-obsolescence due to invention is something nobody can tell about for some time. There will be changes made which are bound to be revolutionary. We, therefore, must separate the studies between gradual obsolescence, which is going on continuously, and sub-obsolescence, which is changing from one type of equipment to a more suitable one.

Essentials in Study of Depreciation

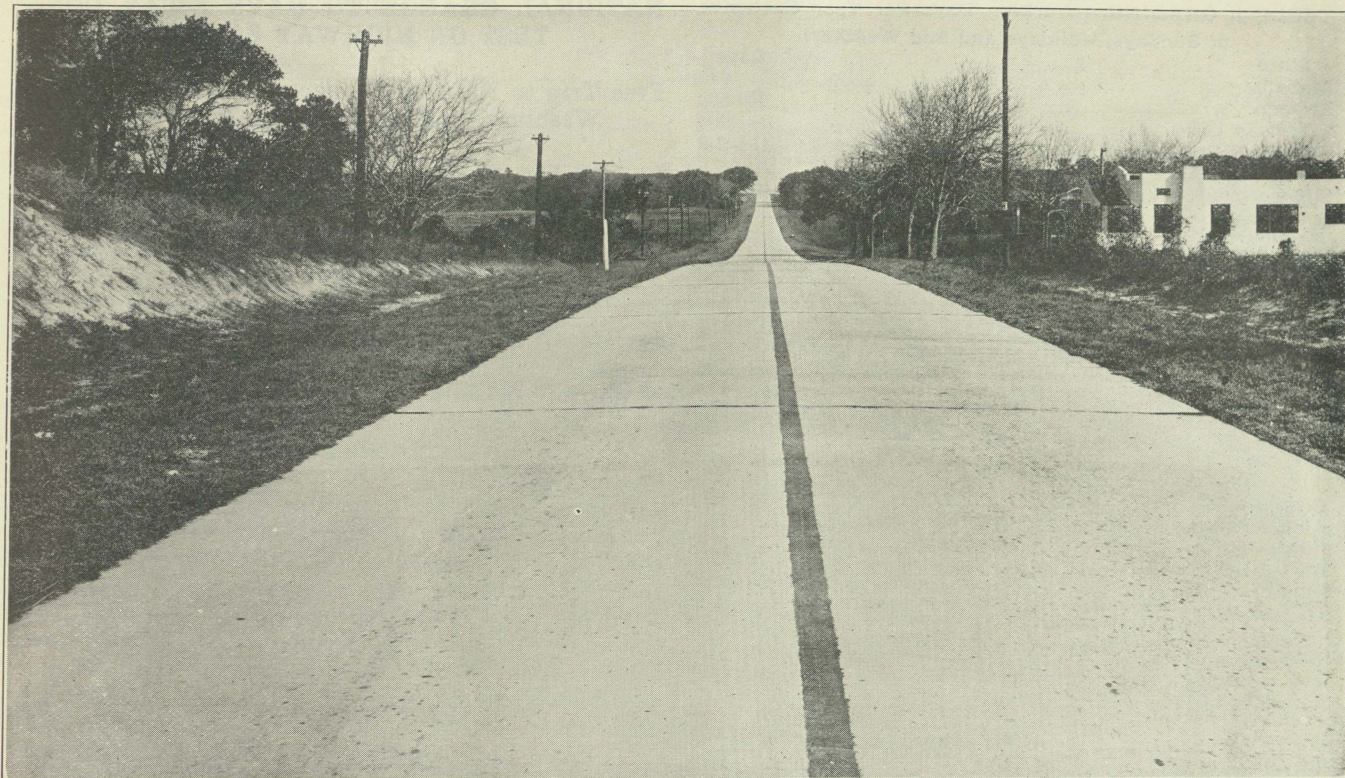
The Bureau of Internal Revenue considers two things to be essential in the study of depreciation:

First—A statement of the useful lives of the depreciable assets of an industry by items or classes of similar items, preferably departmentalized according to the different processes employed, services rendered, or products made by the industry. Such a schedule affords the only possible basis of comparison between the diverse methods for depreciation accounting, and gives the fundamental information required for the determination of essentially similar depreciation rates irrespective of the methods employed.

Second—A statement of the principles and methods of depreciation accounting best suited to the business conditions of the industry to which the results of the study will apply.

The Associated General Contractors have been working upon an equipment rental schedule, and several years ago put out a tentative schedule which has been used to advantage by public officials and contractors. It was felt that the schedule was not complete and so additional studies have been made, with the result that a tentative depreciation schedule has been worked out and gone over by the committee, with a recommendation that it be given consideration. Of course, the variation in working days even in different parts of a state—to say nothing of the United States—makes it necessary to make certain adjustments in rental rates. The working days in the United States vary from 120 to 240 days; it is evident that with such a wide range of working days for road construction, a rental rate applying in the northern part of the United States would not be applicable to those states where the working season is much longer.

It has been very difficult up to this time to place a depreciation figure upon the majority of road equipment due to the great changes which have taken place almost yearly in the construction industry. Equipment which is considered efficient one year would be discarded the next season on account of different methods employed on larger production by the use of other equipment.



Section 1, Road 13, Nassau County

We believe the industry is sufficiently established at this time so that sub-obsolescence due to the inadequacy of equipment will be reduced to a minimum. This factor has not been considered in setting up the proposed rental schedule.

Three Methods of Figuring Depreciation

The committee of the Associated General Contractors agree on three methods of figuring depreciation:

1. The unit of time basis—charge off so much depreciation for each hour, day or month used.
2. The unit of work basis—charge off depreciation according to the work done.
3. Contractor's equipment or job method.

In applying the rental schedule, the question arises whether the rental rates for 120 working days a season should be twice as much as the rental rates for the 240 day season. Unquestionably equipment depreciates even if not used, but there is a question whether it depreciates in direct proportion; that is, if the equipment is not working a certain number of days a year, if it depreciates as fast as if it were working. It would seem to us that such would be the case, and that repairs to the equipment would be the only addition made and spread over the total days worked. An arbitrary figure would have to be set up for this item and probably adjustments made each year.

If a piece of equipment, say a tractor, cost originally \$5,000 and is depreciated at the rate of 20 per cent a year, which would be \$1,000, the interest on the initial investment of \$5,000 at 6 per cent would be \$300 per year. The insurance would probably be around \$50 a year, irrespective of how much the equipment is operated. There would be a fixed charge of \$1,350 a year and if the equipment were operated 120 days, the cost per day would be over

\$11.00, exclusive of repairs and operation costs. If the equipment were operated 240 days, there would be a cost of a little over \$5.50 per day for the above named items, but probably an increased cost in repairs.

The Average Working Year

It would seem to be fair, therefore, to set up the average year's life for the average equipment, giving a straight-line depreciation.

Table I shows the working days upon which grading can be done by states.

Table II shows the working time upon which pavement can be laid by states.

Figure 1 shows geographically the number of working days upon which grading can be done. It is impossible to zone this, as you will note from the wide variation in working days, although generally speaking the working days, as may be expected, are much longer in the southern part of the country than in the north.

Figure 2 shows geographically the number of days pavements can be laid in the United States.

The accompanying table is a schedule of equipment depreciation by percentages. Unquestionably there will be changes in this schedule from time to time, but it is felt by your committee that this will be a working basis on about 250 pieces of equipment, the most of which are used in road construction.

It is the recommendation of the committee that a Committee on Depreciation of Equipment be made a permanent part of the American Road Builders' organization and that this committee work with a similar committee of the Associated General Contractors.

TABLE I, GRADING.—Working Days Per Year Exclusive of Sundays, Holidays and Bad Weather.

State	Days
Alabama	240
Arizona	200-300
Arkansas	300
California	155-300
Colorado	*
Connecticut	200-240
Delaware	220
Florida	240
Georgia	300
Idaho	120-200
Illinois	180-240
Indiana	160-175
Iowa	175
Kansas	200
Kentucky	175
Louisiana	225
Maine	140
Maryland	180-240
Massachusetts	225
Michigan	180
Minnesota	150
Mississippi	240
Missouri	*
Montana	*
Nebraska	250
Nevada	240-300
New Hampshire	140
New Jersey
New Mexico	*
New York	160
North Carolina	200
North Dakota	150
Ohio
Oklahoma	225-240
Oregon
Pennsylvania	190
Rhode Island	190-200
South Carolina	210-240
South Dakota	130-165
Tennessee	190
Texas	240-300
Utah	170-180
Vermont	155
Virginia	180-210
Washington	*
West Virginia	*
Wisconsin	140-150
Wyoming	200

* Data not received.

TABLE II, PAVING.—Working Days Per Year Exclusive of Sundays, Holidays and Bad Weather.

State	Days
Alabama	240-300
Arizona	200-300
Arkansas	300
California	120-300
Colorado	*
Connecticut	125-155
Delaware	160
Florida	240-up
Georgia	300
Idaho	80-120
Illinois	120-135
Indiana	120-140
Iowa	125
Kansas	140
Kentucky	100
Louisiana	225
Maine	110
Maryland	140
Massachusetts	150
Michigan	130
Minnesota	100
Mississippi	160
Missouri	*
Montana	100-120
Nebraska	225
Nevada	150-175
New Hampshire	100
New Jersey
New Mexico	*

—Roads and Streets.

NATIONAL GRANGE TO HAVE ESSAY CONTEST ON HIGHWAY SAFETY

Free Trip to National Sessions of Order at Seattle, Washington, Next Autumn is First Prize

L. J. Taber, National Master, Announces Competition Open to Younger Members—Closes July 4

A nation-wide safety essay contest is to be conducted by the National Grange, it was announced recently by L. J. Taber, National Master. The subject is "Safety on the Highway for Children and Adults." All members under eighteen years of age in any of the 8,000 subordinate granges scattered throughout the United States will be eligible to enter the contest, 126 state and national prizes being offered for the best papers.

Pointing to the many notable contributions which the National Grange, during the 63 years of its existence, has made to the welfare of the nation and of the farming fraternity which it represents, Mr. Taber declared that the organization "is pleased to announce this competition among its younger members, designed to impress upon them, their parents and friends alike, the necessity for care and caution upon the streets and highways, either as pedestrians or as drivers of vehicles."

In selecting the winners, elimination will be made through committees appointed by the subordinate masters in each of the granges. The winning essays will be forwarded to the state masters who in similar manner will select the best state essay; these will be sent to the Master of the National Grange who through a committee will choose the six national winners. The winner of the first national prize will be given a trip with all expenses paid to the National Grange Sessions to be held at Seattle, Washington, this autumn. The other five will be cash prizes. In each of the thirty states where granges exist the best essay will be awarded a cash prize, and the writers of the next three in each state will receive bronze medals. The prizes are being donated by the National Automobile Chamber of Commerce.

The Highway Education Board which is experienced in educational work of this sort is co-operating with the National Grange in the enterprise. The competition will close on July 4 next, by which date, it was announced, all essays must be in the hands of the subordinate lecturers of the various granges. Detailed instructions, with posters illustrating the purpose of the contest, have been sent to the masters of all subordinate granges.

Touching Trust

"Loan me five dollars, will you?"

"Sorry, but I have but four dollars and seventy-five cents."

"Well, give me that. I'll trust you for the other quarter."—Royal Arcanum Bulletin.

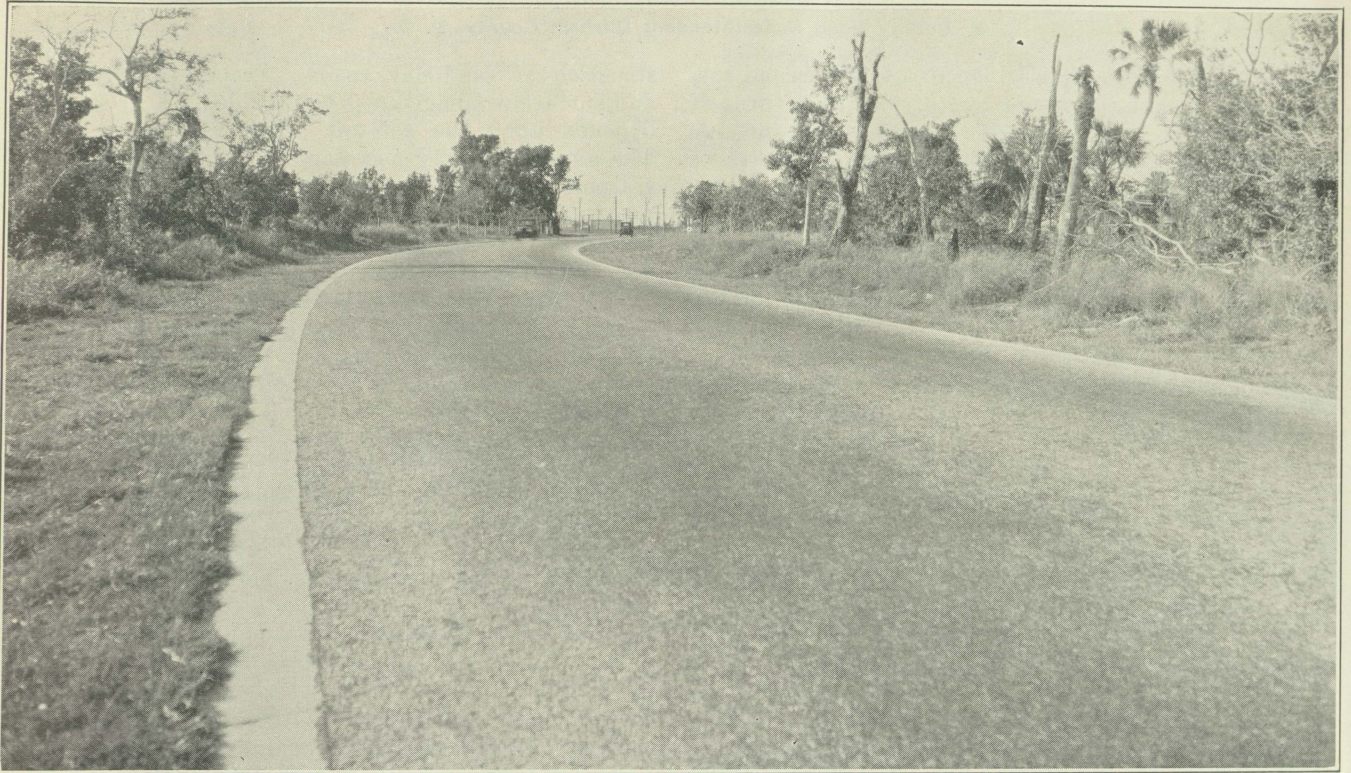
Congenial Role

College Boy: "Do you pet."

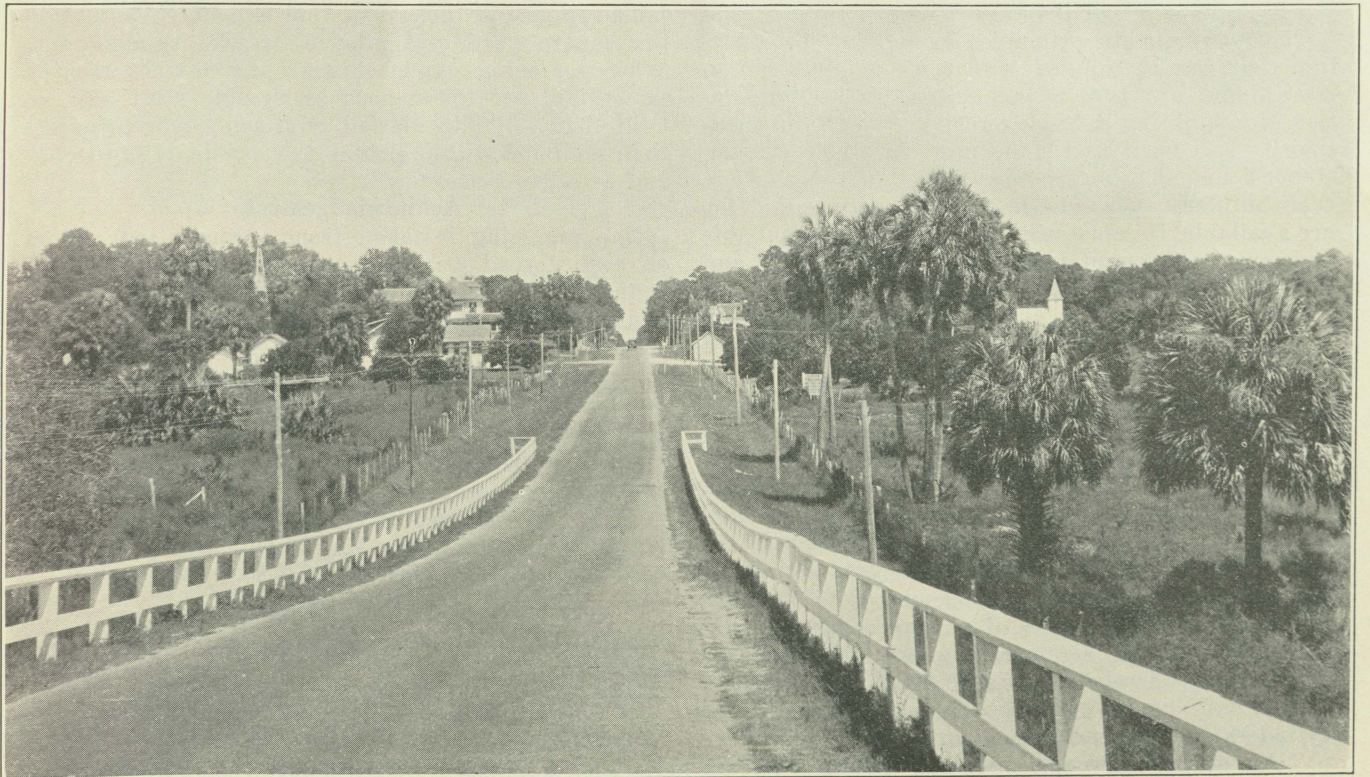
The Girl: "Sure—animals."

College Boy: "Go ahead then; I'll be the goat."—Chicago Bulletin.

Three houses can be built in the time required to erect two of brick, by using a patented form of concrete-slab construction.



Project 654, Road 4, Broward County



Road 2, South of McIntosh

Sand-Clay Roads

By T. L. PENDERGRASS

County Road Superintendent Durham County, N. C.

The name sand-clay is given to a type of road surface that consists of natural or artificial mixtures of sand and clay loam. Out of these materials surfaces are constructed on clay or sand. The character of soil and sand varies so much you can hardly follow any set specification. You must take the best of each one, study it and use what seems best for the particular kind of soils or clays upon which you are building or may be available. Better results are obtained when you can more nearly follow the well established principles in this type of construction.

The requirements for success are that the materials be reasonably suitable in character to secure a bond sufficient to hold in dry as well as in wet weather.

To the engineer or road men who can successfully build this type of road has a broad field to work upon and will find it an interesting study. The idea should be to follow well defined principles as far as you possibly can and to always get the best material available, and use the best plans and specifications as a basis to work upon. To the average county road engineer specifications mean but little when it is impossible to find any material available which is called for in said specifications, but with the average local material you get better results by following the well laid plans in the building of untreated surface roads.

The materials that are usually used are the soils, sands and clays found upon the roads to be surfaced and this material varies greatly throughout the county and varies considerably in a few hundred yards at times in the same location.

General Principles

There are certain principles in highway construction that can be applied with some modification to meet almost any type of soil. Most of the specifications for building sand-clay roads are written scientifically and built under the most favorable circumstances, but that means very little to the average road builder when none of the materials called for are available. He must use the best material available and must understand some of the characteristics and behavior of the materials with which he has to work.

Good drainage is absolutely necessary in the con-

struction of sand-clay roads. Proper sub-drainage and surface drainage must be provided. A great deal depends upon the sub-soil, whether sand or clay. The amount of clay necessary is that amount which will just fill the voids in the sand. It may be approximately determined by the amount of water in the sand. Proper drainage must always be provided for, as hereinbefore stated.

How Best Results Can Be Obtained

The construction of sand-clay roads is a slow process. The best results can only be obtained by giving the road constant attention for some time after it is completed or until such time as traffic has it sufficiently compacted. In building a sand-clay road where you have a sub-soil the road bed should be shaped to the desired crown. The clay is brought on to the road and spread in a layer of 6 to 8 inches at the center, tapering off to a thin layer to the side. It is necessary that the clay be thoroughly mixed with the sand. In many cases the clay is covered with sand and left for traffic to mix and compact. Quicker and better results can be obtained by harrowing and plowing the surface. It should be kept in shape by the use of drags or road machines.

Use of Screenings

As a substitute for sand in building the untreated surface roads good results are obtained by using rock screenings or dust ranging in size from $\frac{5}{8}$ inch to $\frac{1}{4}$ inch stone with the dust partially screened out. By preparing the roadbed as for the regular sand clay, shaping it and giving it the desired crown, screenings can be applied at the rate of approximately 50 pounds per square yard and allowing traffic to compact. Where screenings can be obtained at a cost not greater than \$1.50 per ton a good serviceable road can be built that will take the oil treatments more readily than sand and will be just as serviceable as sand-clay and at a less price.

Acknowledgement

The foregoing is taken from a committee report on county road construction, presented January 17 at the 26th Annual Convention of the American Road Builders Association.—Roads and Streets.

Pioneer Automotive Engineer Tells of First Auto Show

Recalling the first National Automobile Show, held 28 years ago at Madison Square Garden, New York, Frank N. Nutt, prominent in engineering circles, and who every year has attended a National Show, recites some interesting reminiscences. To quote Mr. Nutt:

"The first show was held November 3 to 10, 1900. Thirty-one different makes of cars were shown. Eight were steam driven, eight electric and fifteen by gasoline motors. Twelve of the fifteen gasoline cars were fitted with single cylinder motors, two with two cylinders and one had three cylinders.

"Out of the thirty-one makes of cars then on display only four are still being made.

"Power plants with one or two exceptions were located inside of the body and under the front or rear seat.

"The steering wheel made its appearance on one or two cars, one commentator saying editorially 'a few have adopted that foreign freak, the wheel, which is inconvenient and complicated and cannot compare with the lever.'

"The show which was sponsored by the Automobile Club of America was an unqualified success, and the club came in for a lot of praise for the efficient manner in which it handled 'New York's first real Automobile Show.'

"One publication contrasted the exhibition with the 'farce held in 1899 when a dozen vehicles were gathered together and palmed off as an Automobile Show, at which vigilant guards prevented visitors from kneeling to look under the carriages—and

promptly sent away anyone exhibiting too much intelligent curiosity.'

"In addition to viewing the cars the visitors were treated to test demonstrations in the Garden. These tests were designed to show that the cars would run and could be steered and stopped.

"It is interesting now to recall some of the specifications of cars at the 1900 show. Here are a few:

"Tops—Mostly none; some canopy.

Fenders, or mudguards—Metal frame with patent leather sewed over the frame.

Windshield—None; used goggles.

Steering gear—Stick or lever; one or two had wheels.

Springs—Full elliptic or long semi-elliptic.

Lamps—Kerosene; carbide with gas and water tank a part of the lamp; electric on electrics.

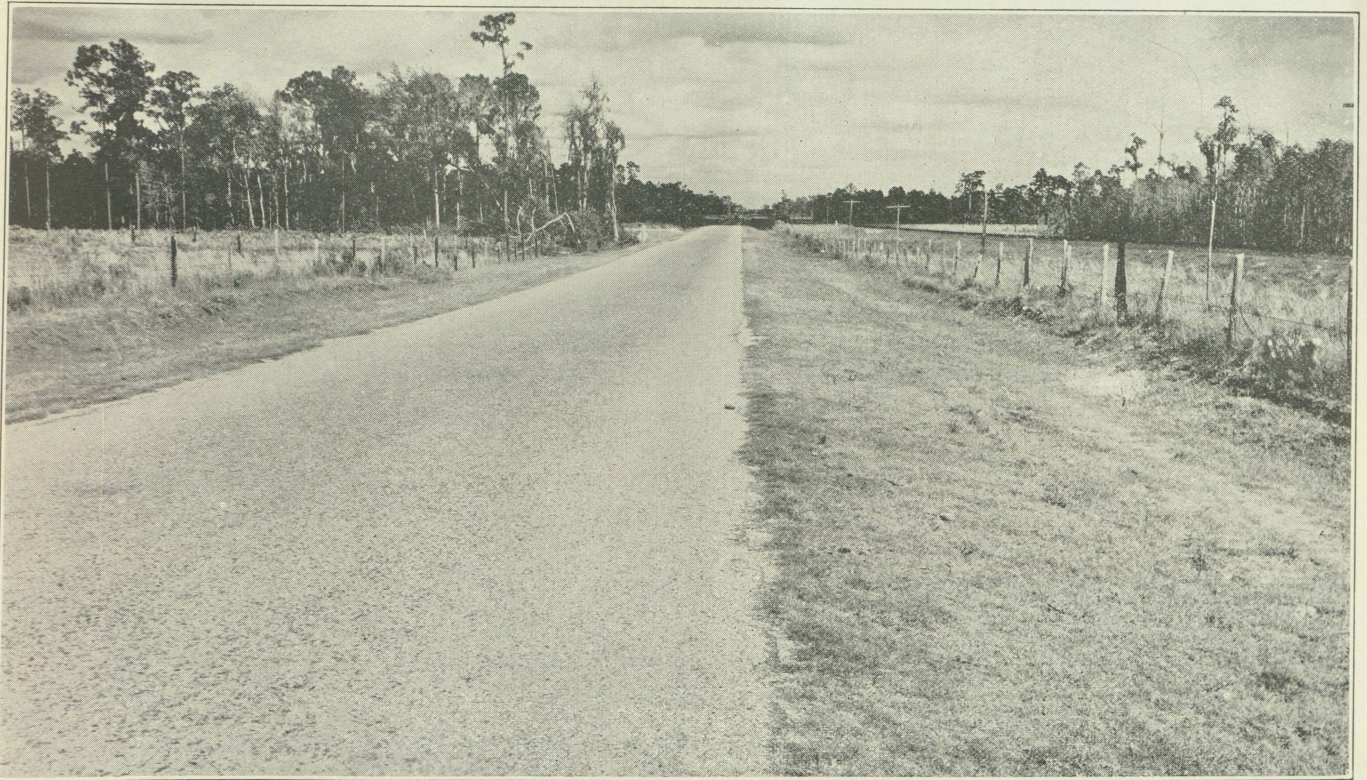
Drive—Chain.

Signal—Mechanical and electric bells.

Ignition—Make and break; one or two with jump spark.

Instruments—No speedometers, ammeters nor gauges."

Mr. Nutt at one time was chief engineer of the Haynes Company, the oldest automobile manufacturers in the United States up until the time it quit business a few years ago. He is now a member of the engineering staff of the AC Spark Plug Company, another pioneer concern.—Georgia Highways.



Project 648, Road 2, Hardee County

Wanted to Rent--A Concrete Highway

"OF ALL things in this world today, the most rentable thing is a concrete road, a road of comparable type," says the Houston Chronicle, in urging a bond issue for improving the highways of Texas. "There is absolutely nothing for which there is so much demand. But you have to have it before you can rent it. Gasoline tax is road rent. By increasing thousands, the customers are ready to pay that rent. But you can't rent them until you have them.

"Wouldn't it be foolish to try to buy a few planks each week out of your pay, and so try to finally build a house that way? You don't do it that way. Nobody else does. Nobody finances anything that way. And there is just as much room for common sense in road building as there is for just plain good common sense in house building or anything else.

"That's the way they build big office buildings, too. The most of the office buildings in Texas have

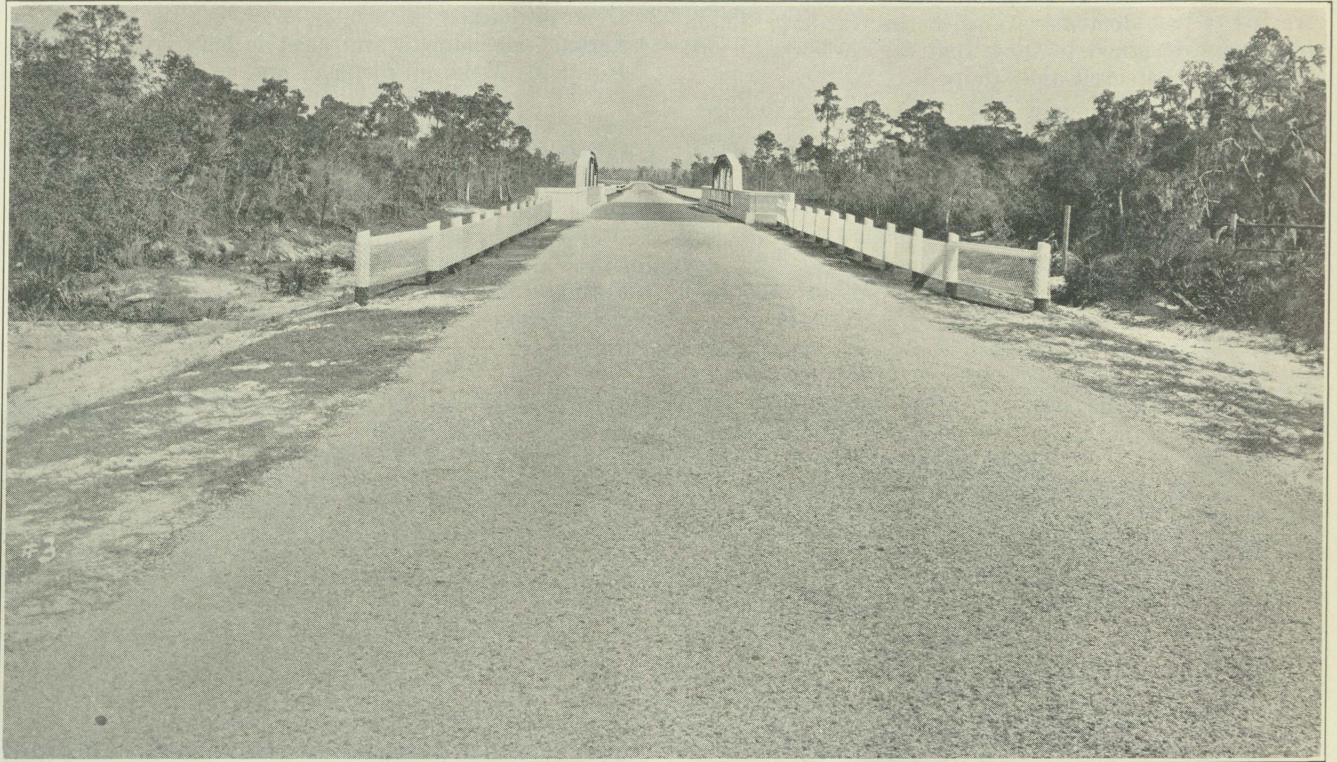
bond issues, and the rents each month pay the interest and a monthly proportion of the principal. In their own affairs hard-headed business men do it that way. They are not so foolish as to think of building an office building a room at a time out of such current revenues as rooms already built are bringing. They issue bonds, build their buildings, and liquidate the bonded indebtedness with the rents.

"That is the way the railroads, competitors of the highways, were built. The railroads never attempted to extend their lines out of money currently received from hauling freight and carrying passengers. They issued bonds to extend their lines.

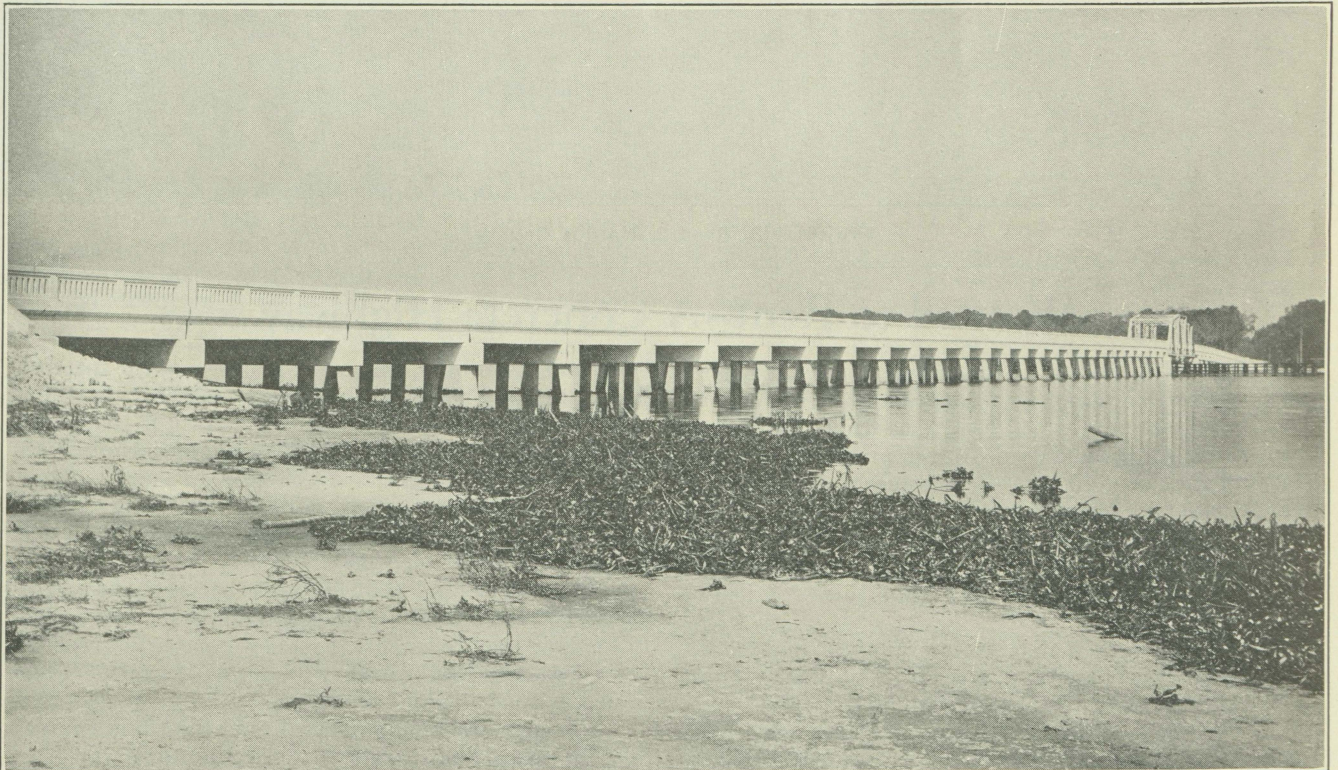
"The pipe line companies pursue the same course.

"The telephone companies do it the same way.

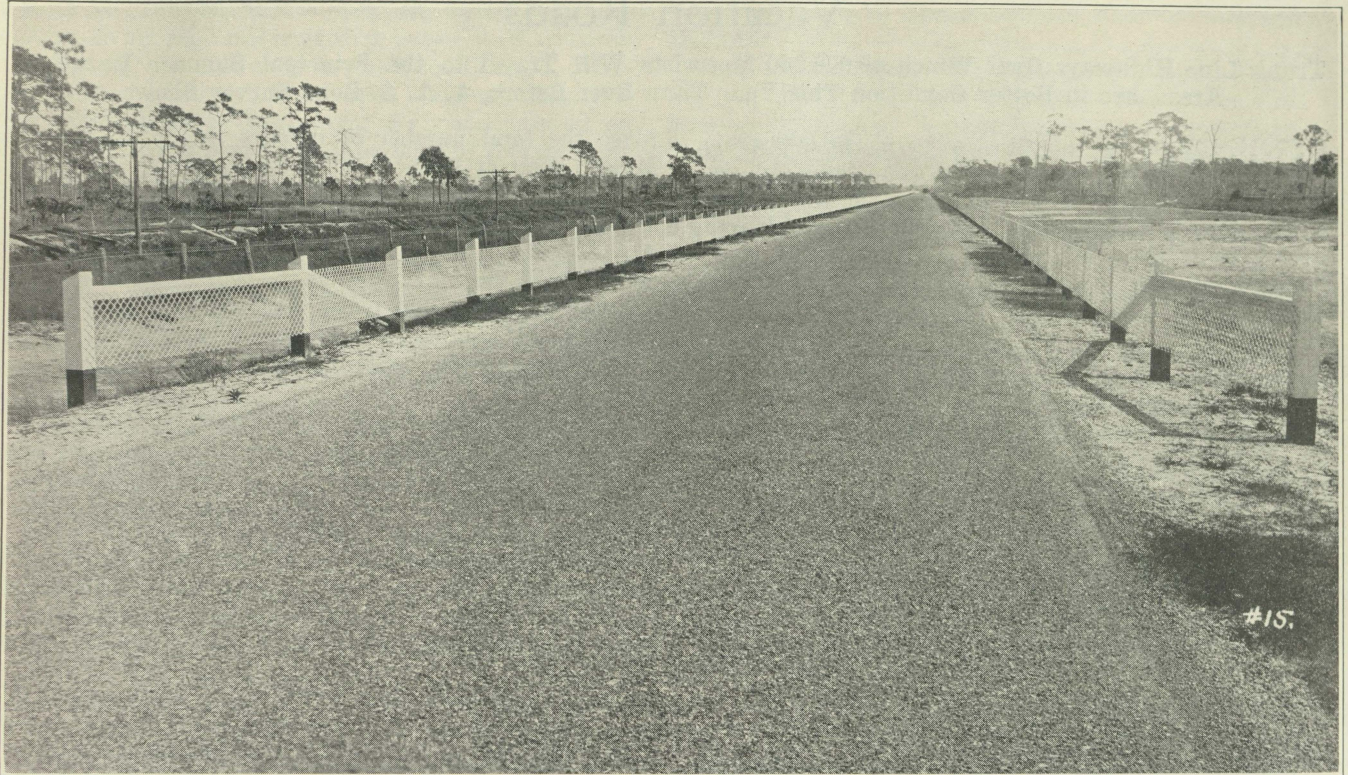
"If it is the right way for these level-headed business men to do it in their own affairs, why isn't it the right way for us to do it in the conduct of the State's affairs."—Badger Highways.



Project 648, Road 2, Looking Over Big Charlie Creek Bridge



Project 664, Doctor's Lake Bridge, Road 3



Project 564-C, Road 5

Within the Reach of All

A clergyman, anxious to introduce some new hymn-books, directed the clerk to give out a notice in church in regard to them immediately after the sermon. The clerk, however, had a notice of his own to give with reference to the baptism of infants. Accordingly, at the close of the sermon he announced, "All those who have children they wished

baptized, please send in their names at once." The clergyman, who was deaf, supposing that the clerk was giving out the hymn-book notice, immediately arose and said: "And I want to say for the benefit of those who haven't any, that they may be obtained from me any day between three and four o'clock, the ordinary little ones at fifteen cents, and the special ones with red backs at twenty-five cents each." —Journal of American Medical Association.

Contracts Awarded by State Road Department January 1st, 1929, to June 17th, 1929

Proj.	Road	County	Contractor	Length Miles	Length Feet	Contract + 10%	Type
55	14	Alachua	L. M. Gray	16.77		206,412.32	R. B. S. T.
624	50	Hamilton	Manly Const. Co.	6.23		84,888.18	R. B. S. T.
858	4	Duval	F. S. Whitney	7.00		68,438.10	Mac. Asph.
678	10	Bay	McVay Lindsay & Son	5.00		9,295.00	Hauling
695	2	Lake	Manly Const. Co.	0.40		5,380.54	R. B. S. T.
6	1	Madison	Duval Engr. & Contr. Co.	5.45		91,560.17	R. B. S. T.
669-Y	27	Collier	Kerr and Lawrence	13.55		99,705.56	Grading
854	60	Walton	G. W. Byrd	9.81		85,160.28	Sand Clay
855	60	Walton	C. C. Moore Const. Co.	9.32		90,311.26	Sand Clay
661	2	Lake	Manly Const. Co.	.14		9,313.15	Sheet Asp.
767-688	10	Bay	H. W. Johnson		75	2,567.88	Timber
40-B	4	Brevard	I. B. Purdy			10,565.72	Embankment
806-A	25	Hendry	R. C. Huffman Const. Co.	11.00		32,594.05	C. G. & G.
806-C	25	Hendry	R. B. Stuart	11.00		44,761.37	C. G. & G.
806-D	25	Hendry	R. C. Huffman Const. Co.	12.76		62,950.91	C. G. & G.
62-B	24	Osceola	Florida Bridge & Const. Co.		789	115,447.66	Conc. Bdg.
518	5-A	Lafayette	Broadbent Const. Co.	17.57		244,783.73	R. B. S. T.
587-B	5-A	Columbia	Perkins & Lawson		99	11,405.71	Conc. Bdg.
678	10	Bay	McVay Lindsay & Son	4.00		13,860.00	Hauling
715	28	Union	L. M. Gray	5.26		70,922.96	R. B. S. T.
716	28	Bradford	Duval Engr. & Contr. Co.	11.22		157,799.23	R. B. S. T.
587	5-A	Columbia	Duval Engr. & Contr. Co.	4.43		53,885.30	R. B. S. T.
718	5-A	Columbia	Duval Engr. & Contr. Co.	8.22		101,724.95	R. B. S. T.
815	54	Okaloosa	G. W. Byrd	12.50		27,434.00	Sand Clay
717-706-A	28	Bradford-Clay	Manly Const. Co.	12.06		173,340.83	R. B. S. T.
749-750	14	Gilchrist	L. B. McLeod Const. Co.	8.52		100,722.27	R. B. S. T.
820	96	Jefferson	H. D. Spangler & Co.	9.38		63,008.18	G. & D.
821	96	Jefferson	H. D. Spangler & Co.	5.13		25,478.80	G. & D.
615	5	Sarasota	L. B. McLeod Const. Co.	1.20		20,359.90	R. B. S. T.
	25	Palm Beach	Southern Asph. Const. Co.	4.00		5,575.87	S. T.
Total				211.92	963	\$2,089,653.88	

Vacation Roads

Trunk Line Highways Over Which 45,000,000 Motorists Will Travel to the Principal Summer Vacation Areas, are in Better Condition This Year Than Ever Before, A. A. A. Road Survey Shows

THE 1929 motor tourist caravan, 45,000,000 strong, will encounter better touring conditions this year than ever before, according to the annual pre-season survey issued by the National Touring Bureau of the American Automobile Association.

The high lights of the survey of the national motoring body are:

First, the trunk line highways over which the motorists will travel toward the principal summer vacation areas are on the whole in better condition this year than they have been in any previous season.

Second, a considerable amount of new mileage has been added and new important gaps filled in since the close of the last touring season, thus offering a greater diversity of routes and, in some instances, more direct connections between the centers of population and the vacation objectives.

Third, motoring services available along practically all main trunk highways have reached a higher standard of perfection.

Fourth, the agencies catering to motor tourist travel have improved their accommodations and recreational facilities.

Fifth, the movement toward uniform motor vehicle regulations has made some progress and the motorist is likely to encounter less annoyance at the hands of petty officials than heretofore.

The A.A.A. survey is based on reports from more than 1,000 affiliated A.A.A. motor clubs in the United States and Canada, as well as on reports from State highway officials throughout the country.

"Almost without exception," says the survey, "the car owner will find good roads leading to his chosen vacation spot, whether it be East, West, North or South, or in nearby Canada.

"This is true of North and South highways leading into New England, New York, Pennsylvania, Virginia, West Virginia, the mountains of Western North Carolina, Eastern Tennessee and Kentucky, Michigan, Wisconsin and Minnesota.

"It also holds good as regards the great transcontinental trunk lines from the Atlantic to the Pacific, to the recreational areas of the national parks and forests, to the Ozark resorts in Missouri, to the Black Hills of South Dakota, to Colorado and the Inter-Mountain section, to the great play areas of the Northwest, including Washington, Oregon, and adjacent British Columbia and to other playgrounds of the Pacific slope."

Despite the fact that hundreds of thousands of miles of paved highway afford a diversity of routes to the main vacation areas, the A.A.A. warns that every indication points to congestion, and for this reason, the suggestion is made that the motorist who wants to make "fast time" this year would do well to travel in the early morning and get the major part of his day's distance behind him while the roads are carrying their minimum load.

Another suggestion put forward by the national motoring body is the importance of paying attention to the detours on the main highways. Latest information available from reports of all A.A.A. agencies

place the total number of detours in the East and Middle West at 1,388.

"As these detours undergo daily change, motorists are advised to check in at the touring bureaus of A.A.A. clubs at frequent intervals. Up to the minute detour maps are on display at the touring counters of all A.A.A. offices and every motorist can save time and money by taking advantage of this service."

By way of further advice to the motorist, the A.A.A. says:

"Prepare your car well before you start and don't overcrowd it. Secure road information in advance of actual departure. Remember that road conditions change from day to day. Hence, the necessity of checking up on your routing from point to point. Don't depend on roadside information, but go to your motor club, which is the only agency capable of maintaining up-to-the-minute information. Particularly is this true at the present time, when highway-building agencies are pushed to keep apace with the increase in the number of cars. To meet this condition, detour maps are issued at regular intervals to A.A.A. motor clubs in different sections. Start your touring day early. Avoid congested areas—A.A.A. maps show how—if you are traveling on a schedule. If you are unable to reach a hotel at which you have reservations, notify them, as some other wayfarer may desire the room. Finally, don't try to cover too much territory for the time at your disposal or for the allotted budget. Remember that physical exhaustion mars the pleasure of the tour and makes for accidents."

Here are some of the major road improvements listed in the A.A.A. survey:

"On U. S. Route No. 1, an important highway from Florida to Canada, the stretch across Georgia from Augusta to Waycross has been completed and is of great importance to summer travel.

"Another important stretch in Georgia, on U. S. No. 41, which is a main artery of travel from Florida into the Middle West, has been completed south of Cordele. This gives for the first time a paved highway from Florida into Atlanta, Ga., and is used by travel en route to Chicago, Detroit and surrounding territory.

"Motorists from the Southeast en route to the famed Shenandoah Valley of Virginia, will find two much-needed stretches completed on U. S. No. 311. These are from Roanoke to Rocky Mount and from the latter point to Martinsville.

"Car owners traveling along the Atlantic seaboard will find a new bridge across the James river at Newport News, making for a quick route between that point and Portsmouth, avoiding Norfolk.

"The stretches between Lexington and Clifton Forge and between Covington and the West Virginia line have also been completed. These are on U. S. No. 60 and open up an interesting scenic route from Eastern points via the Shenandoah Valley to Charleston, W. Va., Lexington and Louisville, Ky., and St. Louis.

"Travel from the nation's capital into the Shenandoah Valley will be greatly expedited as a result of the opening up of the road between Sperryville and Luray, Va., on U. S. No. 211. This route from Wash-

ington to New Market is now all paved with the exception of nine miles of dirt between Warrenton and Sperryville, which is in good condition.

"In the vicinity of Cincinnati, a stretch from this Ohio metropolis to Lexington, Ky., was opened on U. S. No. 25, which provides a better and shorter route between these two cities.

"Two or three unpaved gaps on U. S. No. 31, north of Birmingham, Ala., have also been completed, which opens up a good unpaved road from Birmingham to Nashville, Tenn., and northern routes.

"An unpaved gap on U. S. No. 51 in northern Tennessee was completed, making a very good connection from Memphis to Cairo, Ill., from which point good highways lead to practically all northeastern cities.

"A gravel stretch on the above route was also completed from Memphis to Jackson, Miss., and offers an

important route of travel between New Orleans and Memphis.

"One of the worst stretches on the Lincoln Highway, U. S. No. 30, has been paved. This is the link between Omaha and Dunlap, Iowa. At the same time, it assures a good all-weather route from Omaha to the East.

"One of the important accomplishments in the Southwest was the paving of the stretch on U. S. No. 80 from Abilene to Sweet Water, Texas. This goes a long way toward eliminating the bad road between Dallas and El Paso and completing the work under way on U. S. 80 for some time.

"These outstanding additions to the nation's network of highways, together with others of lesser importance in every State, have done much to facilitate the use of the roads by motor vacationists."

Distantly Related

"An' so yer name is Riley?" said one chance acquaintance to another over their cups. "Are ye any relation to Tim Riley?"

"Only disthantly. Oi wuz Dennis Riley's first child an' Tim wuz his tinth."

Fashion and Finance

It was at the Bangor ball and Eben Hawks viewed the gay, dancing figures sweeping about him. It was a novelty to the old banker to see modern feminine evening dress; the flimsiness of some of the garments astounded him.

He looked up to gaze into the eyes of Henry Halliburton—once a man with a large income, but, owing to recent reverses, now almost in want.

"Eben," said the worried figure opposite. "My Wagram Paper has passed its dividend. Do you know any good security which will yield as much as that did once?"

Eben Hawks slowly surveyed the colorful scene about him. "No, Henry," he replied, "evidently, you didn't either. Frankly, Henry, some of your investments are like the shoulder straps on these evening gowns—lots of interest but little security!"

This Modern Age

"Has your baby learned to walk yet?"

"Heavens, no! Why, he's just learning to drive the car."

—Kansas City Star.

A Georgia lawyer tells of a darky charged in a town in that state with theft. His lawyer decided to put him in the box in his own behalf. The magistrate, being doubtful if the darky understood the nature of an oath, undertook to examine him on the point.

"Henry," he said, "you know what will happen to you if you tell a lie?"

"Yes, suh," said Henry. "I'll go to hell and burn a long time."

"Quite right," replied the judge. "And now you know what will happen if you tell the truth?"

"Yes, suh," said Henry. "We lose the case."

"I should be very happy, because I'm married to the type of girl I wanted.

"She is a marvel of physical perfection. We have been married three years and never once have I seen her hair disarranged or her gown untidy. Her hands are ever white and smooth. Marvelously manicured nails gleam when she extends her finger tips in greeting. Her teeth are rows of white pearls. Her complexion would shame any school girl's. She's wonderful! Her immaculate appearance is a source of never-ending joy to me.

"But I'm getting tired of eating in restaurants!"

Safety First

"Yes," said the timid passenger to the airplane pilot. "I understand I'm to sit still and not be afraid and all that; but tell me, if something happens and we fall, what do I do?"

"Oh, that's easy," said the pilot. "Just grab anything that we're passing and hang on."—Philadelphia Public Ledger.

Getting the Breaks

From the bedroom of the twin boys came the mingled sounds of loud weeping and hearty laughter, so father went up to investigate.

"What's the matter up there?" he inquired.

The joyous twin indicated his weeping brother. "Nothing," he chuckled, "only nurse has given Alexander two baths and hasn't given me any."—Epworth Herald.

Making the Game Safe for Man

We know a former hockey player who now uses his old shin-guards when he plays bridge with his wife.—Philadelphia Inquirer.

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Status of Construction

THROUGH MARCH 31ST, 1929

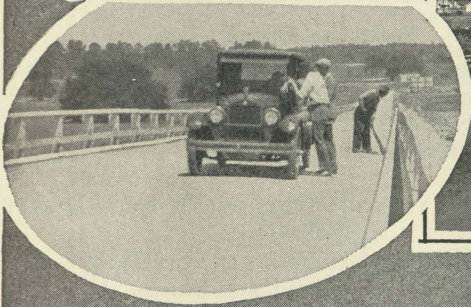
Proj. No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete
6-A	Duval Engr. & Contr. Co.	1	Madison	5.56			3.67	0.00	S.T.R.B.	48.50
52	R. G. Lassiter & Co.	1	Escambia	10.00				0.00	Concrete	0.00
53-C	Manly Const. Co.	2	Lake	1.87			1.87	1.87	Bit. Conc.	100.00
55	L. M. Gray	14	Alachua	16.44			16.44	0.00	S.T.R.B.	79.00
56	Nelson Bros.	10	Leon	17.98				15.10	Concrete	80.00
62-A	A. D. Weeks	24	Osceola	12.52	12.52	12.39			Graded	98.00
62-C	Everglades Const. Co.	24	Osceola	11.83	11.83	11.83			Graded	100.00
62-D	A. D. Weeks	24	Osceola	12.62	12.62	12.49			Graded	97.00
624	Manly Const. Co.	50	Hamilton	6.48			2.80	0.00	S.T.R.B.	37.04
672	J. B. McCrary Engr. Corp.	1	Leon	9.92				4.95	Concrete	50.00
673	R. G. Lassiter & Co.	1	Gadsden	14.97				5.99	Concrete	39.60
678	McVay Lindsay & Son	10	Bay	5.65			3.95	0.00	S.T.R.B.	53.00
685	Pararo Const. Co.	10	Franklin	18.46			13.00	3.48	S.T.R.B.	70.00
687-B	Wm. P. McDonald Const. Co.	2	Lake	14.03			14.03	7.72	S.T.R.B.	90.00
688	State Convict Forces	10	Bay	9.32	9.32	9.00			Graded	95.00
707	Leon County Forces	43	Leon	5.31	4.83	2.12			Graded	43.00
719	Broadbent Const. Co.	5-A	Suwannee	8.57			8.57	1.00	S.T.R.B.	73.00
722	R. J. Carroll	48	Jefferson	8.83	8.83	7.86			Graded	91.00
723	State Convict Forces	66	Leon	11.76				10.50	Sand Clay	90.00
724	Leon County	66	Leon	10.67	10.67	9.99		0.00	Sand Clay	87.00
726	State Convict Forces	19	Dixie	12.62	12.62	12.00			Graded	94.00
728	State Convict Forces	10	Leon	11.65	11.65	11.18			Graded	97.00
732	Gilbert & Hadsock	17	Polk	8.94	8.94	7.60			Graded	85.00
733	W. J. Bryson Paving Co.	33	Walton	4.23	4.23	3.17		0.00	Sand Clay	53.50
734	Penton-Mathis Const. Co.	40	Walton	7.89	7.51	4.35		0.00	Sand Clay	48.73
735	W. J. Bryson Paving Co.	40	Walton	13.71	13.71	6.86		0.00	Sand Clay	49.00
740	Baker & Lewis	10	Gulf	9.63			9.63	5.82	S.T.R.B.	90.00
743	Baker & Lewis	10	Bay	18.25			9.12	6.75	S.T.R.B.	47.15
744	State Convict Forces	19	Madison	5.79	5.79	5.79			Graded	100.00
745	State Convict Forces	19	Taylor	15.95	15.95	15.95			Graded	99.00
749	State Convict Forces	14	Gilchrist	7.81	7.42	7.42			Graded	92.50
750	State Convict Forces	14	Gilchrist	12.97	7.65	7.00			Graded	57.00
751	W. J. Bryson Paving Co.	40	Walton	7.28	6.93	3.43		0.00	Sand Clay	36.21
752	W. J. Bryson Paving Co.	40	Walton	8.72	8.28	4.36		0.00	Sand Clay	38.76
755	B. Booth	17	Polk	11.22	11.22	9.54			Graded	85.00
763	Duval Engr. & Contr. Co.	50	Suwannee	12.23			5.55	0.00	S.T.R.B.	45.00
764	Duval Engr. & Contr. Co.	50	Suwannee	12.00			12.00	4.00	S.T.R.B.	85.00
765	Duval Engr. & Contr. Co.	50	Suwannee	7.00			6.99	0.00	S.T.R.B.	71.00
766	State Convict Forces	10	Bay	8.74	3.88	1.17			Graded	10.00
767	State Convict Forces	10	Bay	5.27	4.76	4.20			Graded	63.00
780	F. W. Long & Co.	29	Okeechobee	11.00			4.63	0.00	S.T.R.B.	35.00
781	F. W. Long & Co.	29	Okeechobee	11.00			0.00	0.00	S.T.R.B.	0.00
782	C. F. Walker	29	Okeechobee	6.62	6.62	6.62			Graded	100.00
787	State Convict Forces	10	Walton	16.27	3.90	1.95			Graded	9.32
788	W. J. Bryson Paving Co.	10	Walton	17.54	3.51	2.28			Graded	8.30
798	State Convict Forces	13	Nassau	15.03	6.50	3.06			Graded	25.10
802-A	C. C. Hayes	10	Okaloosa	8.68	7.90	3.91			Graded	48.00
802-C	Curry & Turner	10	Okaloosa	10.24	8.19	5.12			Graded	47.00
803	Collins Const. Co.	10	Okaloosa	11.13	8.35	3.34			Graded	46.20
804	C. A. Steed & Sons, Inc.	67	Glades	18.56	18.56	18.56	18.56	17.56	S.T.R.B.	99.00
807-A	R. C. Huffman Const. Co.	25	Palm Beach	10.82	10.82	10.82	10.49	0.00	S.T.R.B.	80.00
807-C	R. C. Huffman Const. Co.	25	Palm Beach	6.13	6.13	5.09	3.49	0.00	S.T.R.B.	70.00
815	Silas Gibson	54	Okaloosa	13.58	13.58	13.58			Graded	100.00
824	W. J. Bryson Paving Co.	41	Okaloosa	9.82	9.82	9.82			Graded	100.00
840	State Convict Forces	115	Walton	10.45	2.96	1.63			Graded	15.00
842	W. J. Bryson Paving Co.	115	Walton	10.00	1.53	0.00			Graded	3.00
844-A	State Convict Forces	115	Okaloosa	7.10	6.74	3.55			Graded	50.40
844-C	State Convict Forces	115	Escambia	5.63	5.63	2.25			Graded	44.30
845	State Convict Forces	19	Taylor	8.57	0.00	0.00			Graded	0.00
Total Complete March 31, 1929				2800.50	2737.02	1383.19	1983.79			
Complete month of March				11.06	18.99	18.87	20.69			
Total complete February 28, 1929				2789.44	2718.03	1364.32	1963.10			

TOTAL MILEAGE COMPLETE

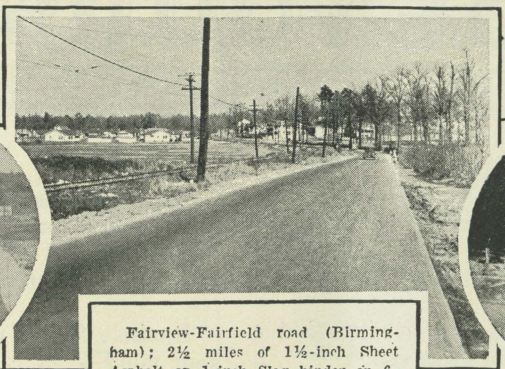
	Concrete	Brick	B. C.	S. A.	B. M.	Asph. Block	S.T.R.B.	S.T.S.C.	S. C.	Marl	Total
Complete Feb. 28, 1929	277.59	17.13	39.69	114.61	109.57	23.20	1086.14	226.39	142.31	27.58	2064.21
Complete month of March	8.10		.06				17.03		4.67		29.86
Complete March 31, 1929	285.69	17.13	39.75	114.61	109.57	23.20	1103.17	226.39	146.98	27.58	2094.07

To this was added 12.72 miles of sand clay surface placed on Project 747 and 748.
This work was completed in October 1928.

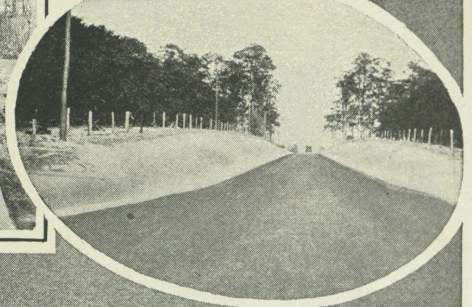
F. A. P. 298, on Dixie Highway (Dougherty County, Ga.); one of two Sheet Asphalt projects totaling 11½ miles in which Basic Slag was used in the binder course; laid 1924 by Sam E. Finley (Atlanta).



Fairview-Fairfield road (Birmingham); 2½ miles of 1½-inch Sheet Asphalt on 1-inch Slag binder on 6-inch Slag Concrete base; laid 1923.



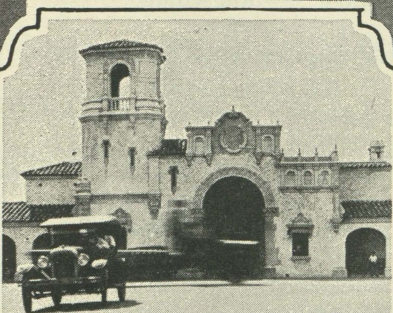
F. A. P. 13 (Orange County, Fla., near Plymouth); 9 miles Sheet Asphalt on 1½-inch Slag binder and water-bound Florida Rock base; laid in 1922 by Wm. P. McDonald Constr. Co., of Tampa.



Slag Binder SHEET ASPHALT



Sheet Asphalt paving on Slag binder course. Photo shows Ellis Street, one of Atlanta's busy thoroughfares, crossing Peachtree, at Hotel Winecoff corner.



Sheet Asphalt paving on Slag binder and Slag Concrete base at West Palm Beach; laid 1926 by Southern Paving and Constr. Co., of Little Rock.



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in Southeastern States

IN LAYING Sheet Asphalt, experienced road builders have found that best results are obtained when Blast Furnace Slag is used in the binder course. And a still further improvement is noted when the wearing surface is supported by a slag concrete base.

There is a definite reason for this. Chemically, portland cement and pure

"ENSLEY" & "ALA CITY"
BASIC SLAG
CRUSHED & SCREENED

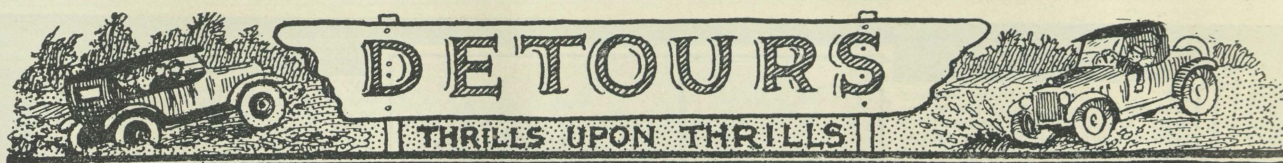
are almost identical. This close kinship accounts for the unusual solidity and strength of slag concrete. The use of slag in the binder course follows soundest engineering practice.

Results in more than THREE MILLION sq. yds. of street and highway paving have been uniformly satisfactory both from the standpoint of service under high speed traffic and—low cost.

BIRMINGHAM SLAG CO.

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ATLANTA	BIRMINGHAM	JACKSONVILLE
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Stitches in Time

Watch your step on it.

Taking the other fellow's dust is better than "to dust returneth."

Six feet have awaited many a driver who would not give an inch.

Just because you see its tracks is no sign that a train has just passed.—Badger Highways.

A New York air transport company advertises "Flights started at any hour for any desired destination. Return trips not guaranteed." Somehow the last of this discourages haste about the journey.—Rochester Democrat and Chronicle.

The Female of the Irish

Census Taker: "Your husband's name, please."

Mrs. Grogan: "Pat."

Census Taker: "I want his full name."

Mrs. Grogan—"Well, sor, when he's full he thinks he's Gene Tunney, but whin Oi lays me hands on 'im, he's just plain Pat again."

Peggy: "My grandmother only weighed two pounds when she was born."

Percy: "Gosh! And did she live?"

"No man's lips have ever touched hers—so she swears."

"Well, you can hardly blame the girl, now can you?"

Wheels in His Head

"Maude says her husband disgraced her on their honeymoon."

"How?"

"On the steamer she wanted the other passengers to think an ocean trip was an old story to them, but almost as soon as they went on board he pointed to a row of lifebuoys and asked the captain what was the idea of all the extra tires."

The late William Rockefeller used to tell with delight a story illustrative of the financial genius of his famous brother, John.

When John was a little fellow," he would begin, "a so-called Indian doctor visited our town with a cure-all. The doctor, to get started, took out a bright new silver dollar and said he would auction it off.

"How much am I bid?" he said, "for this bright silver dollar?"

"But the crowd was cautious, silent, suspicious. No bids were made.

"How much am I bid?" shouted the Indian doctor. "Come, come, gents! A nickel? A dime?"

"I bid a nickel," piped John D. Rockefeller at last.

"The dollar is yours, boy," said the doctor. "Hand up your nickel."

"Take it out of the dollar," piped little John D., "and gimme 95 cents change."—Boston Globe.

Turn the Crank

Inventor (to capitalist)—"This, sir, is an epoch-making machine."

Capitalist—"Is it? Then let me see it make an epoch."—Christian Evangelist.

Rastus: "Did you all wear dem flowers I done sent you?"

Mandy: "I didn't wear nothing else but."

Rastus: "Lawdy, where did you pin 'em?"

The Boosters

During an extremely cold spell in the Puget Sound country, something gummed the works of a thermometer hung outside the Chamber of Commerce building and the worst it could do was seventy-two above.

Along came a man, bundled up to his ears, but still shivering. For a moment he gazed at the thermometer, then turned away in disgust, saying: "Ain't that just like the Chamber of Commerce, anyway?"

At the beginning the speaker assured his audience that he would watch his time very carefully. "I will not, he said, duplicate the case of the speaker who talked for hours; the toastmaster discovered a man asleep in the front row and reached over and tapped him on the head with his gavel. The man partially awoke, looked up and said: 'Hit me again, I can still hear him.'"

Raising the Limit

"I'se for a five-day week. How 'bout you, Sam?"

"Man. I'se for a five-day week-end."—Vancouver Province.

Journey's End

Lady (in a pet store)—"I like this dog, but his legs are too short."

Salesman—"Too short! Why, madam, they all four reach the floor."—Mugwump.

We'd Rather Stay Miserable

RHEUMATISM

The Science That Makes People

Well and Happy

—Ad in Daytona Beach (Fla.) paper.

Fencing for Time

"Brother Jones," said the deacon, "can't you all donate some small contribution to de fund for fencing in the cullud cemetery?"

"I dunno as I can," replied Brother Jones. "I don't see no use in a fence around a cemetery. You see, dem what's in there can't get out, and dem what's out sho' doan wanta get in."

All Explained

"Fritz, your essay on 'My Mother' was just the same as your brother's."

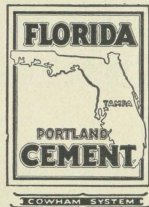
"Yes, sir, we have the same mother."—Cleveland News.

Florida Cement

EXCEEDS

State Highway Specifications

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CAPACITY



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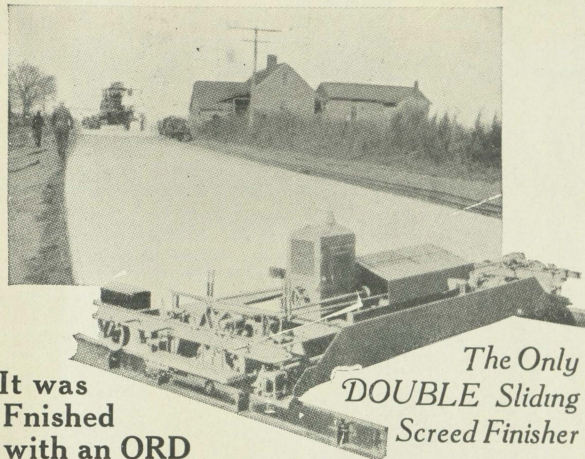
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"A Florida Product for Florida Construction"

Florida Portland Cement Co.

Tampa, Florida

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Screed Finisher

Not a bump, not a bubble from end to end. A thoroughly compacted, load-proof pavement from top to bottom of the slab. And down in record time with lower labor costs. That is why the ORD is eating up the big and little jobs in every part of the country.

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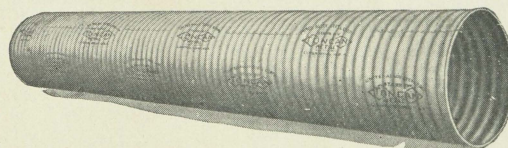
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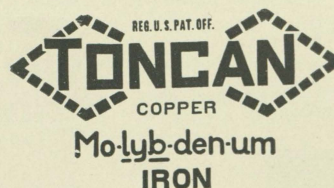


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THE BERGER MFG. CO.
Jacksonville, Fla.

SALVAGE *your old roads*

*These photographs were taken on the Taylorstown Road,
Washington County, Pa.*



Tarmac
*widens and
modernizes
narrow roads
at
little cost...*

It is an economic crime to tear up a road if it has a good foundation. With Tarmac there is a way to salvage thousands of miles of old roads that have been down for years. Many of these old roads have good line and grade and plenty of solid metal compacted by years of traffic. These assets are too valuable to be wasted by tearing up to replace with high-cost pavements. Tarmac will salvage them at low cost.

Roads too narrow can be widened—roads too rough or whose surface will not withstand the wear of modern traffic can be given new, durable surfaces with Tarmac—smooth-riding, high-speed, skid-proof—at low cost. For every type of old road there is a Tarmac method for improving the surface to meet the demands of heavier, faster traffic.

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